

VOLUME VIII

2

# WESTERN INDUSTRY



Twenty-Five Cents

February 1948

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Always VICTOR is the reliable source of everything needed for gas or electric welding and flame cutting.

Now thousands of patriotic women are contributing their time and skill toward speedier wartime production . . . and they're doing a good job.

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easy to handle tools.*



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## EDITORIAL COMMENT

(Communications on any subject of interest to our readers are welcomed. If author wishes, his name will not be used. Unsigned contributions will be disregarded.)

### The Time to Plan Is Now

POST-WAR planning is no simple matter. Inevitably it is hinged on the world situation, and it involves a lot more than developing works projects, natural resources and new industries to take up the slack in employment. Listen to the observations of Dr. George B. Galloway, research author for the Twentieth Century Fund, who has been making a series of intermittent surveys since June 1941 on activities of post-war planning groups. He says:

"The war is seen to be an episode in a world revolution which began in 1914 and still is under way. . . . The contemporary revolution is regarded as a challenge to liberal democracy, national self-determination, and laissez-faire economics. It can be met only by applying the principle of integration to government, economy, and nations.

"This means economic as well as political democracy, the surrender of sovereignty, and economic planning to reconcile democracy and collectivism.

"The same underlying, impersonal, inexorable trends are seen to be operating in all industrial countries, which are at different stages of development in the same general direction."

Dr. Galloway finds that planned economy is the twentieth-century concept designed to replace nineteenth-century liberalism. Private enterprise on a diluted scale will continue to be the leading force, he says, and describes the post-war American economy as a mixed one in which private enterprise will be preserved as the largest single component, but it will be subject to certain minimum social standards and accompanied by larger doses of public ownership and management."

When Singapore, the Philippines, Java, and Burma, fell before the Japanese onslaught—to say nothing of the fate of most of continental Europe before the Germans—the phrase "too little and too late" burned deep into our settled habits of thinking. Now we are reaping the effects in our living. But perhaps it is the needed urge to prevent its recurrence when we try to win the peace.

### Faith Without Works Is Dead

"A COMPANY'S policy is only as good as the habits it creates," is the quotation ascribed to an industrial engineer by Paris Letsinger, vice-president of the Cummins Engine Company, whose old home was in Fresno and who was manager of the White Motor Truck Company in San Francisco before he went east with Cummins. The remarks appear in a Cummins bulletin titled "Policy or Habit?" and the nameless industrial engineer is further quoted: "Most of the empty factories we see are a striking demonstration of faulty, short-sighted thinking . . . a failure to consider all factors when the buildings were put up. For example, we often have glorified sales to the exclusion of such factors as distribution, parts stock and service, failing to give the customer's needs first consideration. Many overlooked the fact that no product built by human hands is so perfect that it never will require service or parts replacement and they failed to provide this important 'product insurance.' Some neglected to educate the buyer in the use of their units and soon found that their competitors, who had sensed this need, were running away with the market. Don't forget that a policy, no matter how sound it may be, is of no material value until it is transferred into physical activity. It is purely an idealism until its principles become a habit."

# WESTERN INDUSTRY

News, Methods, Solutions to Problems of the  
Manufacturing and Processing Industries of the

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### OUR COVER PICTURE

• Materials-handling equipment capable of moving hundred-ton loads has made possible the completion of many of the West's giant construction projects in unbelievable record time. Here a rigger is seen giving the "hoist" signal to his teammate, the operator of a "Whirley" crane. Photo courtesy of Photo Sound, San Francisco.

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25¢ PER COPY

\$2.00 PER YEAR

Published by King Publications

503 MARKET STREET SAN FRANCISCO, CALIF.

A. C. PRENDERGAST, Editor

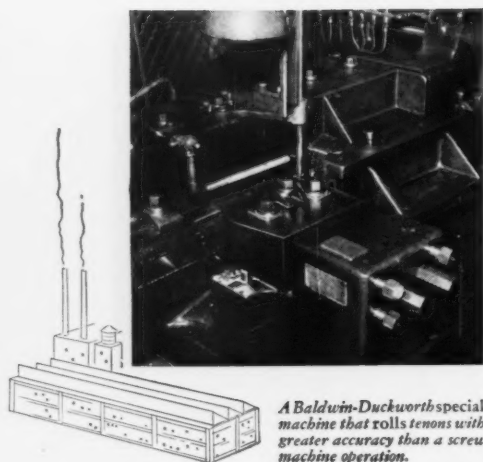
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*A Baldwin-Duckworth special machine that rolls tenons with greater accuracy than a screw machine operation.*

American machine designers are famous for standardized machines and standard tools. The many and amazing special machines they produce are known to few. These are often used only in the designer's own plant. We have a number of them. They are sure "stoppers" for factory maintenance men who visit our plants.

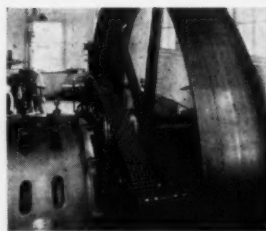
One of them is a tenon rolling machine for producing shoulders on our chain pins. Fair equivalents of the operations it performs could be produced on standard screw machines. Instead of cutting tenons for small diameter pins for some of our chain belts, this special machine rolls them to give uniform concentric circumferences. Tolerances are unfailingly close—a basic essential for the quiet efficiency and long life of Baldwin roller chain belts.

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Your Baldwin catalog is a roller chain belt encyclopedia, but for specialized applications of chain belts for the transmission of power or conveying of materials, also consult a Baldwin man. Baldwin-Duckworth Division of Chain Belt Company, 352 Plainfield St., Springfield, Mass.

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1. Quiet, positive, slip-free transmission.
2. Continuous, jerk-free, smoothness.
3. Service unaffected by dirt and dust.

**IT'S BALDWIN-EQUIPPED**

*Better Drives Through  
Better Methods!*

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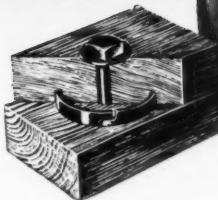
## **ROLLER CHAIN BELTS**



# GROWING PLANTS

Selective cutting under scientific woods management has harvested over-  
age trees and left a healthy, vigorous forest. New seedlings for tomorrow's  
forest will spring up where sunlight can reach down to the forest floor.

The TECO Ring Connector  
spreads the load on a tim-  
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the entire cross-section of  
the wood . . . brings the  
full structural strength of  
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Engineers, Architects, Designers, Builders  
in every field of industry now are using  
engineered timber for heavy duty struc-  
tures. The TECO Timber Connector  
System made this possible. You,  
too, can design in timber with  
TECO. Write for our  
literature today.



**Tough to follow.** He might lead to a tangled jungle, over a burning desert... certainly bound to sail over the seven seas... but wherever he goes his supplies must surely follow. Ammunition, spare parts, food and medicine; these things must get there... and get *there in perfect condition* for victory depends upon it. Cabco Allbound Containers help solve a vital part of this problem for these light weight, strong wirebound wood boxes, scientifically designed for the particular job on hand, take the supplies through intact... as packed. They save weight, save time, conserve lumber and displacement.

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# Spotlight

## on the NEWS

**WESTERN INDUSTRY**  
**FOR FEBRUARY, 1943**

VOLUME VIII

NUMBER 2

### Womanpower on Way to Equaling Manpower in Aircraft and Other Western Industrial Plants

**S**IGNIFICANT figures regarding employment of women have begun to appear. Aircraft plants in California employed 68,700 women wage earners in November 1942, compared with 58,500 in October and 42,600 in September, and record levels were reached in the shipyards. More than 600 were at work in railroad repair shops in November, compared with 337 in October, 62 in September and one in August. Seven of eight reporting shops employed women in November.

Detailed percentage figures reported by H. C. Carrasco, chief of the Division of Labor Statistics, are given below. The decreases in percentage of women in nondurable goods industries is accounted for entirely by the cessation of canning operations.

|  | Nov.<br>% | Oct.<br>% |
|--|-----------|-----------|
| All manufacturing industries.....                      | 20.5      | 20.2      |
| Nondurable goods .....                                 | 35.9      | 38.4      |
| Durable goods .....                                    | 16.0      | 13.9      |
| <i>Nondurable Goods</i>                                |           |           |
| Food and kindred products.....                         | 33.9      | 40.9      |
| Tobacco manufactures .....                             | 73.4      | 71.3      |
| Textile mill products .....                            | 57.3      | 55.5      |
| Apparel .....  | 81.9      | 81.6      |
| Paper and allied products.....                         | 32.9      | 32.1      |
| Printing, publishing and allied<br>industries .....    | 14.4      | 14.0      |
| Chemicals and allied products.....                     | 11.3      | 10.7      |
| Petroleum products .....                               | 3.3       | 2.1       |
| Rubber products .....                                  | 39.9      | 36.8      |
| Leather and leather products.....                      | 32.6      | 31.6      |
| <i>Durable Goods</i>                                   |           |           |
| Lumber and timber.....                                 | 7.1       | 6.7       |
| Furniture and wood products.....                       | 21.4      | 19.0      |
| Stone, clay and glass products.....                    | 14.8      | 14.5      |
| Iron and steel and their products...                   | 7.3       | 6.2       |
| Transportation equipment (except<br>automobiles) ..... | 17.6      | 15.4      |
| Nonferrous metals and their prod'ts                    | 9.3       | 7.0       |
| Electrical machinery and equipment                     | 41.2      | 32.5      |
| Machinery (except electrical).....                     | 7.3       | 6.2       |
| Automobiles and automobile<br>equipment .....          | 2.2       | 0.8       |

Total employment of women in all manufacturing industries was approxi-

mately 158,400, a net increase of 6,000 despite a decrease of more than 15,000 women in fruit and vegetable canning due to the ending of the canning season. Women constituted 20.5 per cent of the total factory force in November, as compared with 20.2 per cent in October.

### Copper From Navajo Lands

Copper sands of the Navajo Indian reservation in northern Arizona are the heart of what may be the largest prospective copper area in the United States, according to J. S. Coupal, director of the Arizona Department of Mineral Resources.

A 75-ton pilot plant has been put in operation in the vicinity of The Gap and a new method has been perfected for recovering copper carbonates from the wind-

blown sandstone of which the ore consists. If the RFC grants a loan for construction of a 1,000-ton plant which proves to be commercially profitable, it may lead to the establishment of many such plants in the area, according to Mr. Coupal, since similar deposits are known to extend east into New Mexico and north into Utah.

Over 4,000 tons have been run through the pilot plant, which is reported to be making a 90 per cent recovery. The project is a steam-shovel operation and as the ore breaks readily and disintegrates easily, costs are relatively low. Average grade of the sandstone beds is estimated to be 0.7 per cent, with localized areas running much higher. A 15 per cent concentrate can be produced from the ore, it is stated.

### Fruit Crops Set Record

California fruit and nut crops in 1942 returned to the farmers \$325,539,000, the highest value of all years, while the volume, 6,330,100 tons, was second only to

• As Mrs. Henry J. Kaiser fired this blast furnace (named "The Bess" in her honor) at the Fontana steel plant, "H.J." announced that three of the Kaiser yards supplied by Fontana can produce 1,000 ships this year



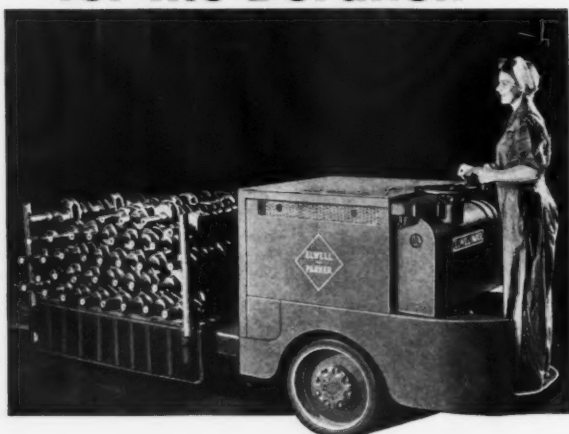
for the Duration—



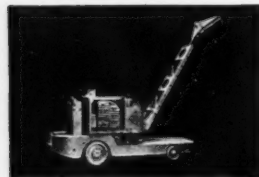
Low-Lift — Handling Skids



High-Lift — Tying Skids



Fork — Tying Pallets



Crane — Heavy Handling

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Your *men* are being siphoned off—into other jobs in your own Plant; into the Nation's Armed Services.

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**Handy New Instruction Bulletin.** "Lady—will you Give a Lift?" explains every detail—large pictures, simple text.

Elwell-Parker Trucks and Cranes by the hundreds are rushing day and night in Western Railroad and Marine Terminals and Yards—at Airports—in Factories and Mills—helping to speed the production and transportation of war materials of all descriptions.

Today—as throughout the past 25 years—The Elwell-Parker Electric Co. is ably represented by Ira G. Perin at San Francisco and Colby Steel & Engineering Co. at Seattle.

For an immediate survey of your Plant, call Mr. Perin or Mr. Colby, or wire The Elwell-Parker Electric Company, 4175 St. Clair Avenue, Cleveland, Ohio.



Ask Mr. Perin or Mr. Colby for your copy of this new Instruction Bulletin for Women Operators of Elwell-Parker Trucks

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425-6 Central Building, Telephone: ELliott 5722

## ELWELL-PARKER *Power Industrial* TRUCKS

ESTABLISHED 1893 • BUILDING POWER INDUSTRIAL TRUCKS SINCE 1906



# Spotlight on the NEWS

1941, according to the annual report made in January by George A. Scott, principal statistician of the California Cooperative Crop Reporting Service. The canned fruit and vegetable pack of 54,080,614 cases, announced by the Cannery League of California, was the greatest on record. These figures do not include a 5,561,598-case pack of fruit cocktail, which is partly remanufactured from other canned fruits.

Despite shortages of labor and materials, the crops were successfully harvested because of unusually favorable weather conditions. There were no hot spells causing high peaks of maturity, such as in the last two preceding years brought one-tenth of the entire cling peach tonnage into the canneries in the space of 24 hours. The cling peach pack, 12,901,714 cases, has been topped a few times in the past, but there was never such a high tonnage of peaches used before, as a result of the growth in popularity of fruit cocktail.

## Another Chromite Project

A primary concentrating plant to produce a minimum of 10,000 tons of 20 per cent chromic oxide (chromite) per month from beach sands of southern Coos County, Oregon, will be constructed early in 1943 by the Humphreys Gold Corporation of Denver, Colo. The \$300,000 plant, second of its kind in Coos County, will be constructed at The Lagoons. The secondary plant at Beaver Mill, being built by Defense Plants, Inc., will be used by the new operation to high-grade the chrome. It is also being used by the pioneer chrome operator, Krome, Inc., whose plant now being built is not yet completed.

## Performance Recognized

Performance records of Pacific Coast shipyards and other Western industrial establishments are recognized by the War Manpower Commission as primary conditions in placing war contracts, just as much as labor supply conditions. In its January 4 classification of Western cities as to labor supply, WMC said, "It should be realized that officials in negotiating war procurement contracts are guided by many considerations, of which manpower is only one. The ability of a concern to deliver or perform a contract on time, and the ability of a concern to fill a contract with a minimum amount of new machinery or

equipment, and other factors are likewise important influences."

The classification of Western cities is as follows: Group 1, current acute labor shortage: San Diego, Las Vegas, Portland, Seattle. Group 2, current balance of labor supply and demand: San Francisco, San Bernardino, Stockton, Phoenix, Everett, Spokane. Group 3, anticipated balance of labor supply and demand within six months, with presently adequate labor supply: Los Angeles, Fresno, San Jose.

WMC recommends that war production contracts in Group 2 areas be renewed only at present level of production, requiring no additional workers, and no new contracts should be placed if alternative facilities for the production exist elsewhere. In Group 3 areas, recommended that production contracts may be renewed at present levels and new contracts placed provided they are completed within six months. This presumes that labor requirements for the succeeding six months period can be met with the current labor supply and relatively little dependence upon recruitment of new workers through migration or other sources, such as raiding other industries.

## Largest Dehydrating Plant

Plans for constructing the largest vegetable dehydrating plant on the Pacific Coast to supply the armed forces overseas are being made by Bakersfield interests at government request. Kern County is one of the largest potato raising centers on the coast. Other vegetables to be dehydrated are sweet potatoes, rutabagas, cabbage and carrots. Organizers of the project

include Joseph Di Giorgio, well-known fresh fruit operator, Hugh Jewett, Alfred Harrell, Frank Jeppi, Oscar Rudnick, Ben and Hugh Sill, Arthur Crites, Lawrence Weill, Forrest Frick, Phil Klipstein, H. K. Fox, A. C. Dimon and Robert Stockton.

## West Makes Lumber Record

Although 1941 was a 53-week year, in terms of work days, and 1942 a 52-week year, the West Coast lumber industry produced practically as much lumber last year as in 1941. The total output was 8,752,499,800 board feet. In average weekly production, notwithstanding manpower shortage, the industry bettered the 1941 weekly average by 1.3 per cent. This is a record unmatched by any other lumber producing region.

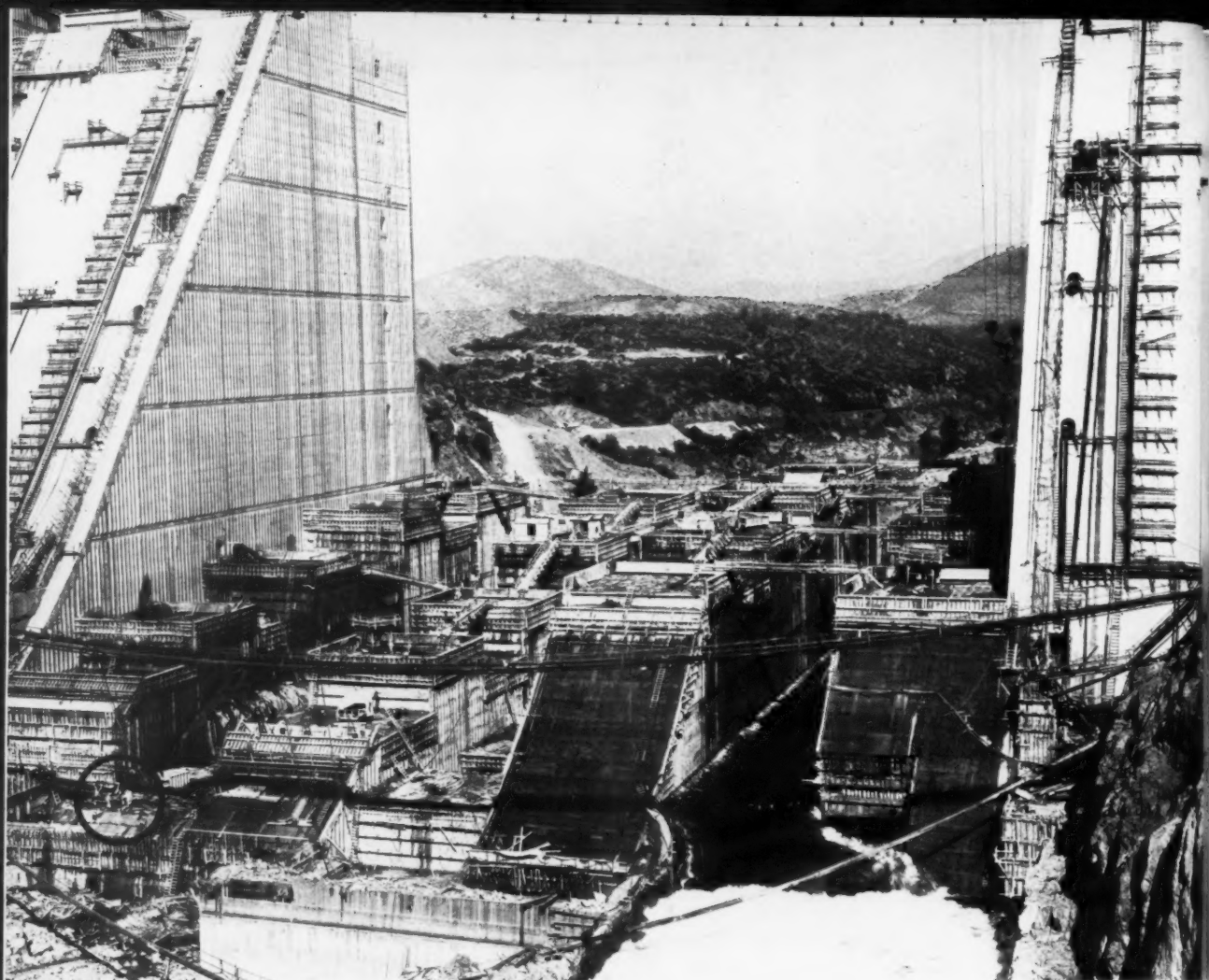
For many months ahead, according to the West Coast Lumbermen's Association, all the war lumber items that West Coast mills can produce will be required, but the volume released for requirements that are not direct military needs—for railroad, mine, highway and related types of construction—is running close to one-half of the industry's production and is more likely to show an increase than to diminish.

## \$25,000,000 For Power

Permission to build and operate a new \$25,030,000 hydro-electric power plant and supply system on the Pit River north of Shasta Dam was granted the Pacific Gas and Electric Company by the California Railroad Commission in a recent order.

• The President expresses gratification for the six-foot scale model of the S. S. John Bidwell, the 109th 10,500-ton Liberty ship delivered by the California Shipbuilding Corp., Wilmington, Calif. Standing, from left: Rear Admiral Howard L. Vickery; Jack Adams; Graham Spickard, Cal-ship's Washington representative; John A. McCone, Exec. vice president.





# PLANNING—Industry Should Lead It

*Portals of The Future Can Be Hinged on Experience, Economy, Soundness,  
Of Private Enterprise If It Tells Its Story Truthfully and Adequately*

**T**HE IDEA of post-war planning, which is now pretty definitely supported by public opinion does not rile up the average industrialist; it's the kind of planning sold to the people that makes him run a temperature.

To appreciate fully the industrialist's attitude, it is only necessary to remember that government stole the idea of planning from the businessman. For government, planning is a new plaything, while for the businessman it is so old it has ceased to be glamorous and is accepted as an integral part of hard, routine work.

There is another important difference between the attitudes of government and

By **CARLETON B. TIBBETTS**  
1942 President of the Los Angeles  
Chamber of Commerce and Executive  
Vice-President and General Manager,  
Los Angeles Steel Casting Company.

business. Plans of a businessman or business community are competitive; a government's plans are monopolistic. An industrialist and his industrial region plan within an area limited by practicality, ever seeking, of course, to extend the limits of that territory. But other businessmen and business communities are doing the same thing, so that there is always a sharp competitive struggle for the best plans

and the keenest planners to serve larger and larger groups of people.

Government, on the other hand, plans with absolute power and has no competition within the nation. It has no check on bad plans or bad planners.

Still another line of demarcation between business and government planning is the necessity for private planners to confine their efforts to the creation of wealth-producing facilities or opportunities making for economic gains. Unless government is communistic, it must restrict its planning largely to non-wealth-producing activities representing little more than "free" services resulting from

the use of taxpayers' money in uneconomic make-work projects.

Finally, there is the all-important difference in financing requirements. Businessmen and business communities must supply their own funds for planning and carrying out those plans, while government has no financial worries, either in planning or application of plans to projects. The businessman and business community must produce economic gains or go bankrupt. Government is under no compulsion to produce gains at any time. The only compulsion in the field of government is that which is exercised over subjects.

But if all these things are true, why is public opinion supporting government's kind of post-war planning and ignoring the perils inherent in it?

The general public has been fooled by government because business had made the fatal error of ignoring scientific analysis of public opinion. Business was the first to apply science to the solution of practical problems in production and distribution. The result has been an economic revolution that is the marvel of the age.

But the businessman, using his full energies in this task, had no time for the study of political science, which would have warned him of changing trends in the philosophy of democracy. Businessmen were inclined to regard politicians as not too bright, and mass opinion as an occasional annoyance but never as the most important factor in the conduct of their enterprises. Public office-holders and office-seekers, however, were smart enough to discover the Achilles heel of the businessman.

Public opinion analysis is a new science, but enough knowledge has been accumulated to give government the whip hand over business. Authorities on public opinion studies now can give us a complete history of the role played by public opinion in the evolution of American democracy.

The nation's founding fathers, it is shown, had no concern over, and wanted no truck with, public opinion. There simply was none in those days, because the

government was set up by a colonial aristocracy which seemed to have a monopoly on education and the means of acquiring information necessary in the formulation of opinion. But gradually lines of communication were opened up and the mass

#### IT PAYS TO ADVERTISE

Post-war planning can be a tremendous injury to the country, if not based on the sound foundation that private enterprise has to lay for its projects, says Mr. Tibbetts. So business must wake up and tell its story to the public, adequately and truthfully, that private enterprise can do a better and cheaper job, without waste that ultimately must come out of the taxpayer's pocket.

of people began to know a good many things that were going on or being talked about. It was inevitable that public opinion had to be reckoned with.

In the first half of the nineteenth century, courts took cognizance of public opinion in handing down decisions dealing with the fundamental philosophy of democracy. By the time the present century opened, courts had accepted the doctrine of public opinion sovereignty in a democracy—no matter whether public opinion was right or wrong, just or unjust, economic or uneconomic.

But businessmen overlooked this development. They still followed, to a large extent, the traditions of the founding fathers who could not be bothered with public opinion. But office-holders, who had to reckon with the new sovereignty on election days were more alert. They knew that popular education and the mass communication of information was organizing public opinion, but at first they had no way of accurately gauging the power of opinion on particular subjects—until the ballots were counted.

Now that the new science of public opinion analysis has been handed to them on a platter, the politicians at last have come into their own, and the revolution within

democracy, long ago foreshadowed in legal sanction, is an accomplished fact.

And right there is the principal reason why business cannot antagonize the cult of post-war planning without violating the first principle of good public relations. Businessmen think their kind of planning is right, is just, and is economic. What government really thinks about its planning is of no significance. The only important thing is that government has public opinion behind it. So what can a poor businessman do?

The first thing he can do is to bow before the sovereignty of current public opinion and tell the world he accepts post-war planning. It will be a simple but long step toward re-establishment of good public relations.

Nothing in this act will obligate him to endorse the kind of planning that government does. In fact, he will be obliged to do just the opposite, and tell the world all about the only kind of planning he can do. He can tell why it is economically the only sound thing to do. He can show how economic gains must be forerunners of social gains. He can point out that the people as a whole cannot lose anything through business planning, whereas under government planning the people can lose not only their sovereignty but their shirts.

The only reason public opinion is supporting the "sweetness and light" brand of planning indulged in by government is because government has not promoted mass information on what the plans are, but has effectively organized public opinion behind the idea that mere announcement of post-war planning insures permanent peace, eternal prosperity, wealth for all, work for none, and heaven on earth, our will be done!

If businessmen are smart, they will change all this by communicating to the people the right kind of information, so that public opinion will organize itself behind the economic planning that is feasible and safe for democracy. Public opinion is not static; it is highly fluid, sometimes mercuric in change when people find out they have been fooled. Didn't somebody discover that last November?







## Conveyor Method Supersedes Sacks in Raw Sugar Handling

**R**AW sugar handling in bags, the method used ever since commercial refining has been in existence, is on the way out. Bulk handling through the use of conveying systems is on the way in. The savings include:

1. Millions of jute bags, costing 12c to 15c apiece, and now practically unobtainable since the war has cut off supplies from India.
2. Many man-hours in transporting the sugar from the plantation mills into the ships and from the ships into the refinery.
3. Reducing the turn-around of ships at both ends of the run more than half.

Matson Navigation Company and the Hawaiian sugar industry decided in 1941 to start using the bulk method for sugar shipped from the islands to San Francisco Bay, and began handling much of the 1942 crop that way. Although the scarcity of materials for building the conveying equipment is delaying immediate extension of the bulk system elsewhere, the sugar industry expects to adopt it generally as soon as possible.

It proved to be a complicated problem to solve, particularly at the first handling points on account of the necessity of keeping separate weights for the sugar from each plantation. Also the differing widths of ships made a stationary discharging sys-

tem at the refinery impossible, so traveling marine legs were designed which permitted swinging the conveyor down into the ships' holds somewhat after the "bend down, sister, if you want to keep thin" movement in calisthenics.

After a careful study of the plantations with their separate mills and the various loading ports, it was decided by the sugar companies to construct the first port loading system at Kahului, on the island of Maui. It was designed to handle 450 tons of sugar an hour directly from dump-side railroad container cars, either directly into the ship or into a large bulk storage bin which could be emptied by reclaiming conveyors and conveyed directly to the ships.



The first conveying unit from the railroad cars was a pan conveyor located in a pit below the tracks, which in turn discharged onto an inclined belt conveyor and into the roof of the bulk storage bin which would hold 40,000 tons of sugar. From this overhead belt conveyor, by means of traveling plows and belt pilers, it became possible to store the sugar the full width and length of the bulk bin.

Sugar was reclaimed from this bin by means of four collecting belt conveyors beneath the bin, which in turn discharged onto a 42-inch belt conveyor in which was built a weightometer to weigh the sugar on the belt in transit. This belt discharged to a cross conveyor and onto two 36-inch traveling dock boom conveyors which extended over the ship's side.

From the end of these traveling boom conveyors were hung two special boat trimmers, which distributed the sugar over the entire holds of the ship. Two hatchways were loaded simultaneously and the total volume of sugar unloaded into the ship was at the rate of 450 tons an hour.

Unloading of the ships on the mainland, it was decided, was to be handled at the Crockett plant of California & Hawaiian Sugar Refining Corporation at the rate of 500 tons an hour, the sugar to be delivered directly into the conveying system of the refinery, either from bulk storage or direct delivery to the melt bin.

As several different sizes of ships are

used in the transporting of sugar, it was necessary to devise some method of accommodating the discharging system to the varying widths of the boats. The answer was in designing two marine legs that could not only travel along the sides of the ships, but also raise and lower the booms and in addition, move the digging elevator in and out on the the booms.

These traveling legs were designed with an operating boom of about 65-foot centers, with the pivot shaft of the boom about 45 feet above the rails. The digging bucket elevator, with 75-foot centers and so designed to travel in and out on the steel boom, discharges into a series of three belt conveyors built into the boom which in turn transport the sugar to the main receiving belt conveyor of the refinery. A throwing system is employed to pile the bulk storage sugar after leaving the conveyor in the refinery.

The legs are all electrically operated, and have a special electrical interlock control system so that the operator of each leg can control the movement of all the belt conveyors, elevators, and hoisting equipment from a small panel board which he can move around with him on the ship's deck.

To use the system, the boom and elevator are lowered down into the hatchway, which is on the average 20 feet square, and all of the sugar in the cross-section is brought out by the elevator. After all of the sugar

down to the bottom of the ship has been removed, large steel scrapers, half-moon shaped, are attached to cables supported on the bottom of the elevator leg and fastened to sheaves in the back of the hold. The same operator then brings out this sugar from the back of the hold directly to the boot of the elevator leg.

Due to the necessity of raising and lowering of the entire boom structure and bucket elevator in order to clear the ships, a unique design of compensating counterweights was made, whereby the boom is accurately balanced and controlled in any of its positions from a range of 22° below horizontal, up to 88° vertical, with the elevator in any position on the boom. These compensating counterweights were so designed and constructed, that during the erection it was possible to add and deduct the weights in these four cylinders so that there was absolutely no uneven pull load on the hoist equipment in either the lowering or lifting positions of the boom and elevator.

The entire handling system was worked out in conjunction with engineers of the Stephens-Adamson Mfg. Co., who were called in by Matson and the sugar factors. Stephens-Adamson Sinden belt pilers and Stephens-Adamson special boat trimmers were used, and all of the belt conveyor troughing and return rolls at Kahului were Stephens-Adamson make, while the weightometer is a Merrick.

• On opposite page is shown ship unloading cargo. Sugar is being lifted out of the hatch and discharged onto conveyor built into the boom, which is in horizontal position. Distance view below at left, while at right the marine legs and operating boom are swung vertically, so that ships can leave or approach the dock



| LINE NUMBER                 | PERCENTAGE  |             | JOB FILLED BY<br>JOB AT<br>DEPARTMENT | JOB TO BE<br>RE-ASSIGNED<br>(JOB NUMBER) | ADDITIONAL FUTURE LABOR NEEDS |    |    |    |    |    |    |    |      |                              |                   |                  |              |                     |                     |                   |               |      |                             |                             |
|-----------------------------|-------------|-------------|---------------------------------------|--|-------------------------------|----|----|----|----|----|----|----|------|------------------------------|-------------------|------------------|--------------|---------------------|---------------------|-------------------|---------------|------|-----------------------------|-----------------------------|
|                             | BY<br>DEPT. | BY<br>PLANT |                                       |  | 12                            | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20   | RECRUITED FROM OUTSIDE PLANT |                   |                  |              |                     |                     |                   |               |      |                             |                             |
|                             |             |             |                                       |  |                               |    |    |    |    |    |    |    |      | UPGRADES                     | TRADE-<br>PERSONS | CURRENT<br>MONTH | 2ND<br>MONTH | 3RD & 4TH<br>MONTHS | 5TH & 6TH<br>MONTHS | TOTAL<br>6 MONTHS | MAXIMUM NEEDS |      | MINIMUM EXPERIENCE REQUIRED |                             |
|                             |             |             |                                       |  |                               |    |    |    |    |    |    |    |      |                              |                   |                  |              |                     |                     |                   | NUMBER        | DATE | NAME<br>TYPE-<br>SOURCE     | RECEIVED<br>TYPE-<br>SOURCE |
|                             | 10          | 11          |                                       |  |                               |    |    |    |    |    |    |    |      |                              |                   |                  |              |                     |                     |                   |               |      |                             |                             |
| PRODUCTION LATHE DEPARTMENT |             |             |                                       |  |                               |    |    |    |    |    |    |    |      |                              |                   |                  |              |                     |                     |                   |               |      |                             |                             |
| 1                           | 2.1         | 1.3         | 0                                     | 0  | 1                             | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 7-43 | 0                            | 0                 | 0                |              |                     |                     |                   |               |      |                             |                             |
| 2                           | 22.9        | 9.2         | 0                                     | X  | 8                             | 0  | 0  | 5  | 3  | 0  |    |    |      |                              |                   | 0                |              |                     |                     |                   |               |      |                             |                             |

• You can't tell Paul Hornaday it's too much trouble to fill out all those tables



## 'IT WORKS'—Manning Table Answer

"Guinea Pig" Case in Los Angeles Proves That It Isn't "Just Another Form," But a Successful Instrument To Get Essential Workers Deferred

By F. PAUL HORNADAY  
President, Leach Relay Company Inc.  
As told to Western Industry

I HAVE seen the Manning Table plan in action and I can state that it works. I strongly urge all those who read this article not to call it another red-tape form thought up to annoy the already harassed business executive now facing too many problems. I say this in all sincerity. I think I can also say it with a certain amount of authority since our plant apparently has been a guinea pig in the development of the present program.

Without revealing military information, it will not be possible to give you a detailed picture of our operations. Suffice to say we happen to be in an extremely essential field which is more highly specialized than the average industrial operation. Our operation requires keen eyesight, nimble, sensitive fingers and open, tractable minds—qualities to be found almost exclusively predominant among the younger men.

As a result, our relatively small organization soon contained a very large proportion of young men doing an essential job which could not be done as well and as quickly by older men. And so, while our personnel proved entirely adequate for the operations involved, we were, be-

cause of the rulings of the National Selective Service Board, placed in the most vulnerable position imaginable.

In this group of younger men, there was also a small but vital group who possessed superior qualities of intuition, ingenuity and imagination and apparently a tireless enthusiasm. It developed these particular men could not be replaced without a complete stoppage of work. In explanation of this smaller group, I wish to state that our field is one of constant change.

Progress is so very rapid in the lines we supply that we are being constantly asked to make experimental models that must be rushed over to the companies using them in order to determine whether or not they are superior under more strenuous conditions of use. If successful, our company adds another item to its line and this smaller group of gifted young men

must watch over and speed the production of the new item as it gets under way.

To cite a specific case, we have only two men who are expert at a particular job. Our plant is on a three-shift basis. Thus, these two men must divide their time so that one of them is present at all times. They are both working 80 hours per week with no relief in sight, since we have not, to date, been able to train anyone to relieve them.

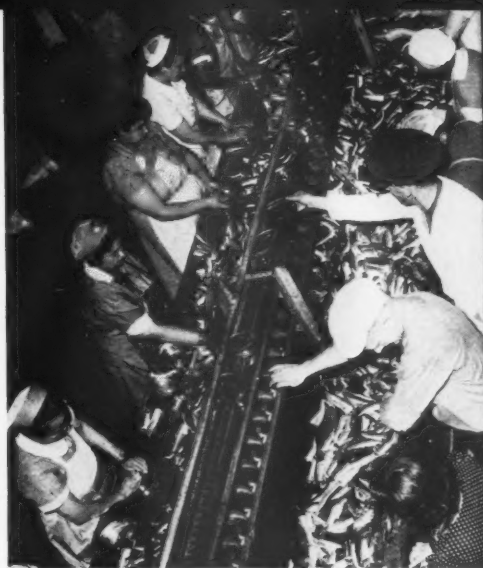
Our problem, therefore, started long before this matter became the subject of national comment. Army and Navy officials demanded production and we wanted to give it. On the other hand, our key men were being called by their local draft boards and we were forced to say we could go no faster than the supply of skilled manpower permitted.

It was suggested that we ask for draft deferments and as the suggestion was made on the recommendation of those who were charged with the progress of the war, we started out to do this. It soon became a case of spending more time visiting local draft boards than we were on the other matters that needed attention. The results,

(Continued on page 16)



• Sixty thousand tons can be toted on this special logging truck with trailer which has 30 heavy-tired wheels. It's rigs like this which get needed rubber



• And the Army knows about fish, too! Inspection staff of Lt.-Col. John H. Kintner supervises operations at a plant in the San Francisco Bay



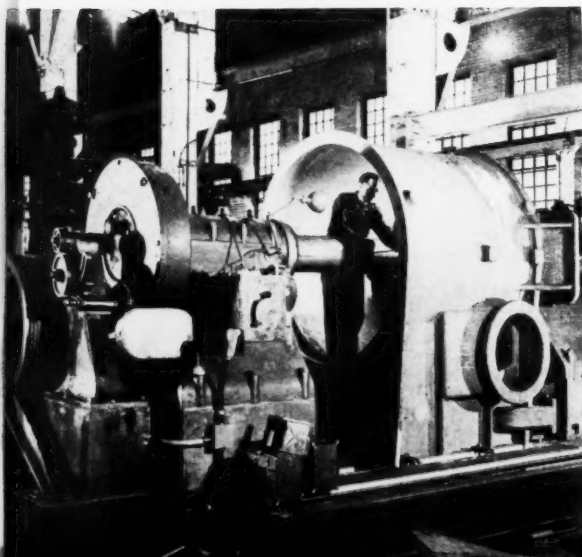
• One of the prefabrication operations for ships is the machining of special parts, being done by Security Engineering Co., Whittier

## WESTERN INDUSTRY In Pictures

• Vultee engineers have perfected a test flight device for "feeling" reactions of airplane, radioing them to apparatus on ground for recording



• Low-pressure cylinder on a triple expansion marine engine is getting its inside machined at Iron Fireman plant, Portland



• "Draft Tube Liner," shown in center, is a vital part of one of four turbine installations at Pacific Gas and Electric Company's hydroelectric powerhouse which is being constructed in the Sierra Nevada mountains





## MANNING TABLES

(Continued from page 14)

oo, were very disappointing. In making his statement, I do not wish to cast any reflection on the many local draft boards who are doing a fine and difficult job. I sympathize with them—but—here are a few specific cases:

1. In a certain highly skilled department, we had two men. The older man was taken by draft and we were left with only the younger man. His loss would result in serious delay in the development of new models, but the draft board ruled it could not grant a deferment in his particular case without undermining its reputation. It was already to the point where it would have to start reaching out for married men and married men with children. They were on a spot. We were on a spot.

2. In another department where we requested deferment, we were unable to get any consideration whatsoever because there was a general feeling among members of this draft board that war industrial plants were hoarding men in order to have them on hand and ready for work if required. We invited members of this draft board to visit our plant, and I am happy to say what they saw convinced them we were not hoarding men and were not being selfish or unpatriotic in requesting deferments.

3. In the case of still another man who could not be easily replaced, it looked as if we could not expect any help. Fortunately, however, there happened to be a man on this particular board who knew industrial operations as it referred to our particular type, and through him we were given an opportunity to state our case. Through visits to our plant and detailed explanations on our product and the use of it, we were granted the deferment.

From these cases, I think you can visualize the time and effort taken from production to spend on this problem. And as you can see in the three cases I have mentioned, one draft board felt that it had no choice, regardless of the merit and facts as disclosed. The other two were convinced only after a great deal of time and effort had been spent in their education to our particular needs.

There were many other cases however, that did not turn out so happily. In the case of workers from distant areas, we had to rely on writing a letter and trusting to luck. Where members of draft boards did not possess the mechanical knowledge to visualize our product and its use, we could only invite them to visit our plant. Some came. Others said they couldn't visit every

plant that wanted a worker deferred. In one particular case we appealed and the appeal was denied, despite the fact that it carried the recommendation of the Navy Department!

This sort of thing kept going on day after day. You can imagine the situation that existed. General Branshaw finally became interested in our problem, with the result that he arranged for a survey of the workers in our plant. It was carried out without our playing any part in the survey nor were the results released to us. The net result of it all, however, was that our workers were classified in various divisions and we were granted permission to use these facts in requesting deferments. Occasionally, even these Army statements were rejected.

When the Manning Table plan was announced, we went to the War Manpower Commission. I don't know how much we expected when we went there, but we were so desperate we would have tried anything.

The material that had been prepared in the survey mentioned above was readily converted into the recommended form set up by the War Manpower Commission. Then our papers were sent to San Francisco for study. Since this was one of the first studies submitted, within three days we received a telephone call stating that

everything seemed to be in order, and that we could regard this as a tentative approval. We were further advised that we would be visited shortly by a member of the commission who could give us our certificate number and before 48 hours had elapsed, we had our number. (*Editor's note: As the volume of Manning Tables submitted increases, the time elapsed will probably be longer than in Mr. Hornaday's case.*)

Today, we can do a sensible manpower job. Many of our workers will be drafted, but in every case we shall have some time in which to work out our problem. The length of time will depend on the degree to which this particular worker has been found to be essential and difficult to replace. It may not be a perfect solution to our problem, but it is a great stride forward. I believe if we, as business men, cooperate with this program and get behind it enthusiastically, it may very well be that a study of all the facts concerning war production will result in another step forward.

In any event, if this little story of the manpower developments in our relatively small plant contributes in any way to a quicker solution of a problem that may be worrying you, I shall be happier than the man who made a hole-in-one back in those distant days when a week-end golf game seemed to be all important.

## Sectional Metal Duct System Accomplishes Ventilation Job

THE chief problem confronted in using any metal duct system for temporary ventilation is to so design the duct as to make it portable and easy to install and disassemble. Los Angeles Shipbuilding and Drydock Corporation solved it by having all duct fabricated in three-foot sections with metal clips at both ends, so it can be easily bolted together.

"The metal duct was designed for 7,000 cubic feet per minute blowers when operating against a two-inch water column pressure," says H. E. Packard, safety engineer for the company.

"All supply ducts are made from No. 22 U.S.S.G. galvanized iron. Our system uses only two diameters of pipe, 16 inches and 12 inches. We have one size Y, 16 inches to two 12-inch diameters. We have two sizes of elbows, 12 inches in diameter and 16 inches in diameter.

"At the termination of each branch, there is a plenum chamber that is 18 inches in diameter and three feet high. This plenum chamber has three 12-inch diameter openings and is used as a supply outlet, as well as a manifold to supply air to adjoining compartments.

"This metal duct has proven itself ideal in actual operation aboard ship, and to date there has not been one location on the ship that we have not been able to provide with proper ventilation by using this metal duct.

"The chief advantage of metal duct over canvas duct is that you can maintain the cross-sectional area of your pipe and, therefore, reduce the pressure drop with a consequent increase in air delivery to the location where the air is needed. The metal duct is far more durable than canvas duct and its lifetime is approximately six months compared to one week for canvas."

The exhaust is accomplished in the main by two-man radial type, exhaust blowers using three-inch diameter flexible metal tubing to carry the fumes from their source and discharge to the outside air. Supply air is taken from the outside for delivery to the various compartments, and the blowers are so located that they will not draw in contaminated air. This is accomplished by 7,000 cubic feet per minute and 2,500 cubic feet per minute supply fans delivering air through portable metal duct systems.





## WOMEN— For Women's Problems

• In session: Jean Hanson, Jean Soukup, Lois Beck, Mildred Walker, Myrtle Morton (asst. coordinator), Sarah Rehling (coordinator), Jessie Hawks, Helen Foltz, Dorothy Lemon, Nell Tauby

### Counselors at Richmond Yards turn doubts and worries into satisfaction

**M**ANY heavy industries have lately started employing women to fill out the required labor force. All who have thus ventured have discovered that some amazing and enlightening personnel problems may arise from the employment of women in heavy industry.

In the Richmond shipyards on San Francisco Bay, where many production records for Liberty ships have been shattered, the women counselors are the supreme authorities on these new problems. They are the people who have to handle and solve the new situations. The counselors have offices in the yards, with the exception of one who is located at the employment office to advise women before they enter the yards, especially in regard to clothing requirements. The counselor's job is handled correctly if she is able to:

- a. Know and understand women employees.
- b. Make easier the transition from normal home life to shipyard employment.
- c. Help women with their working problems.

For instance: Lorraine, a burner trainee, walked into the Field Personnel Office in one of the yards and let her quit-slip flutter down on the desk of the women's counselor. The counselor must sign the quit-slip before a termination is final. Her job in this instance, of course, is to prevent any termination. The reason the burner gave for wanting to quit was that her health was poor and that she didn't think she should work outside in rainy weather.

Sizing her up as a robust person, the counselor engaged her in a conversation which finally unearthed the fact that the woman's real worry concerned the health of her grandmother, who had overambitiously engaged to care for the craft-woman's small child. The counselor was able to avoid the termination by pointing out that shortly a nursery, built by the Maritime Commission, would be functioning and able to care for the child, thus relieving the woman of her real reason for job termination.

The job of smoothing a woman's transition from normal home life to shipyard employment is accomplished largely in the induction talk. When a woman reports for work at any of the Richmond shipyards, she and the other first-day women employees are given a 30-minute induction period.

Most of these workers arrive at their

jobs without any previous industrial experience. They are naturally ready to become confused by the working situation in which they find themselves. An easier adjustment to the ship construction environment is obtained through a discussion of the jobs to be done, attitudes toward work, supervisors, and co-workers, health, safety, proper clothing, company policies and procedures, facilities and services for employees and suggested standards of conduct.

A good example of the type of work problem that can be solved by the counselor is that of Dolly, a welder. Dolly was the girl who sought an interview because she was afraid her boss didn't like her. Her leaderman, she feared, didn't approve of women working in the shipyard, didn't believe they would ever be able to do the work, and, she thought, was not going to waste his time finding out.

Dolly wanted to work and the crew needed a helper, but they didn't want to buck their leaderman. The counselor obtained Dolly's transfer from the assembly ways to the plate shop; there was a particular leaderman there who was volubly enthusiastic about the production progress of the women in his crew. He was glad to obtain Dolly's services and he put her happily to work. The counselor didn't stop there: she went back to "sell" Dolly's for-

*(Continued on next page)*

ner leaderman on the girl's subsequent veld footage record and to prepare him to welcome women on his crew in the future.

An important part of the complete induction program, before dispatch to the job, is a brief tour of the yard to follow the flow of work in shipbuilding and to locate important production centers.

Counselors can assist in preventing absenteeism, which disease exists among women workers as it does in those of the stronger sex. If an absentee is sent to the counselor before returning to her job, the counselor may be able to offer assistance which will avoid future occurrences. Family responsibilities and health reasons usually figure prominently in this problem.

A considerable part of the counselor's time is used to contact supervisors, to assist them through job analysis in the effective employment of women.

The counselors are constantly on the alert in field observations to discover new ways in which women can be utilized in shipbuilding and to continue job analysis. They also can help in determining why women are not proving satisfactory in certain jobs. By digging out the reasons for the failure, they are able to make recommendations for readjustments. There is a continual necessity on the part of counselors and women's coordinators to check women for proper work clothing and to advise those who are not dressed according to the desired standards.

Their availability to women as a sympathetic and interested listener is important. The grievance may be real or imaginary, but an interview gives the employee a feeling of being considered as an individual worthy of personal attention. Just the opportunity to clarify thinking on a subject by talking about the difficulty may be the only assistance needed. Some of the interviews are with satisfied workers merely wanting to express their satisfaction or to make suggestions.

It should be evident by now that the women's counselor is not a mere Dorothy Dix, with benefits of a purely spiritual nature. Production records indicate that the service helps to reduce labor turnover, lower absenteeism, and increase yard efficiency.

### Scrap Shipments

Shipments of iron and steel scrap to consuming mills from July through October from six Western states totaled approximately 394,215 tons. The quota set for the six states for the last half of 1942 was 641,000 tons, and the tonnage shipped by the end of October represented 61.5 per cent of this quota, as compared with a nation-wide average of 57.7 per cent for the total national quota.

Steel scrap requirements for 1943 for the six westernmost states are now estimated at 1,692,000 tons.

# Food Supply Problem Worries Washington

**Westward for Huge Dehydrated Foods Production Prospect of Feeding The World Turns Attention**

By ARNOLD KRUCKMAN

**T**WO of the outstanding Administration headaches here are food and Smaller Business. We hear in fugitive fleeting news items about your food hardships on the West Slope, but (in the larger sense) we have not yet experienced any real lack here.



The Administration knows that food scarcities ahead are grave, and people like Wickard are rather timorous about telling the nation the real story. Nelson, on the other hand, is unhappily aware that Smaller Business has

not been given much help, and that it still has harder times ahead.

To make things more difficult for both Wickard and Nelson, Congress will ask some very impudent questions about food and Smaller Business. This may be one of the reasons why a curious concatenation of circumstances blended the efforts of the two War czars to do something about food and something about Smaller Business.

The brick business logically has been one of the casualties of the War. Superficially they think of it in WPB as Smaller Business. In some of the permanent agencies of the Federal Government it is regarded as one of the tightest and most effective combines in the nation. Assistant Attorney General Thurman Arnold would probably say so if you asked him. There are upwards of 100 brickyards and plants now standing idle, scattered widely over the nation. The best official list available shows something like six or eight in Colorado, possibly one or two in Wyoming. It is quite probable there are more out on the West Slope not catalogued in the combine lists.

Recently when Lou Holland, head of the Smaller War Plants Division, of WPB, a fine, big, St. Bernard-like person of friendly instincts and happy relations in Kansas City, was desperately bewildered about this lack of action in the Small Business problem, someone apparently sold him on the idea that it might be a bright solution to convert the 100 brickyards and plants into dehydration plants for production of concentrated foods.

Nelson also apparently found the idea a good pill for some of his headaches and went into it seriously. At this writing there seems a reasonable chance that the brick-

yards may find a beneficent lessor or buyer in the Government, and that Nelson and Holland may feel they have done a good deed in relieving some pressures on some Smaller Business; and that Wickard may hopefully expect to start a substantial chain of dehydration plants, which would promise more food for lend-lease clients, and open another market for farmers, and provide opportunity for some desolate Smaller Business people.

It remains to be seen if the brickyards are capable of being converted without excessive expenditure of critical materials, and the use of labor; and if they are properly located in relation to the foods to be processed, and in relation to transportation for distribution. There seems considerable question about most of these factors. Usually a brickyard is simply a thing of four walls and a roof.

John I. Lever, associated here in the East with Fritzsche Brothers, food processors, has told the Government the *sine qua non* of dehydration is: 1. Ample supplies of fruits and vegetables at reasonable prices; 2. Diversity of supplies, a long processing season which reduces overhead; 3. Adequate farm labor in the vicinity and adequate factory labor; 4. Bulk freight shipping facilities, preferably by water, both in and out. He points out that raw ma-

(Continued on page 20)

**One of the best-informed writers at the Nation's Capital, Arnold Kruckman, presents each month authoritative comments on political developments and their practical application to industry of the West. Any reader who wishes additional information may write to him directly, using business letterhead, at 1120 Vermont Avenue, N.W., Washington, D.C. Inquiries will be answered free of charge. You also are invited to contact him personally in Washington. Copies of pending congressional bills may also be obtained free of charge.**



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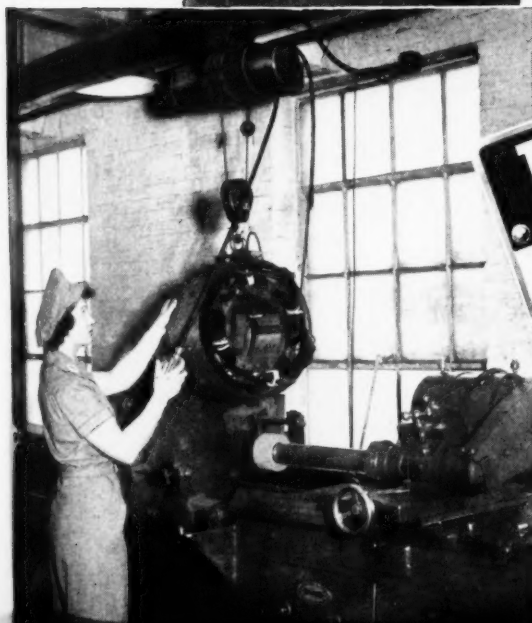
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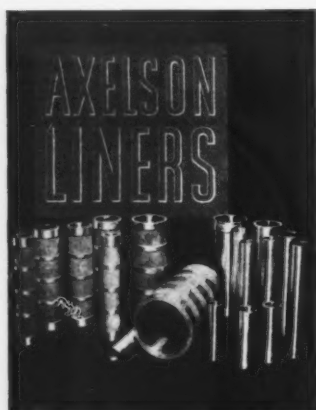


materials usually have 95 per cent water content, and the processors cannot afford to ship from remote interior points; 5. War strategy requires that production be concentrated near ports of embarkation; 6. Accessibility to domestic markets. He told the Government people that where these factors focus, operations may be most successful.

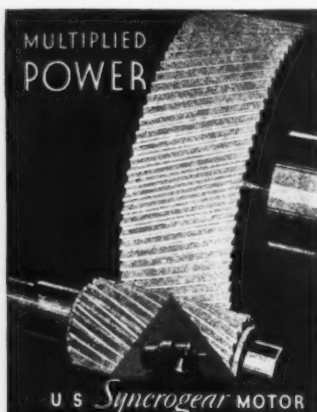
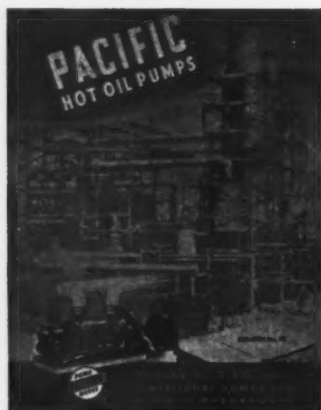
Many of your friends here in Congress and in the Government agencies have been struck by the way these specifications seem tailor-made for the West Slope. The National Farmers Union has asked Congress to provide \$2,500,000,000 to increase food

production. The White House is entirely friendly to vigorous expansion of irrigation and reclamation; when Wickard gets the Food Administration tangle straightened out, Administrator Parisius unquestionably will get behind the projected increase in irrigation and reclamation facilities; Congress is entirely friendly; and there is sound reason to think that draft-labor adjustments will make your labor problem easier in the not too far distant future. And this War is not expected to cease as soon as popular thought would have it, so far as sober Government thinkers are concerned. From the distance of 3,000 miles, here, in Washington, it seems to us as if dehydration is your particular

and special trade opportunity. The need for all kinds of vegetables, fruits, milk, butter, eggs, and meat, immediately ahead, appears to indicate there is still a more urgent need beyond. The market appears to be expansive for a number of years. Your guess about the length of the War is about as good as the expert guess. The experts range from 5 to 20 years. During all those years the pressure of food, particularly upon us, will grow by inverse proportions. All the world, not in the Fascist sphere, will increasingly demand our food. After the War, conquerors and conquered will clamor for our food. And the world will demand our food for many years after the War. The Department of Agriculture officially forecasts that the strong demand for dehydrated foods will grow yearly. "The longer the War lasts, the stronger will be this demand." Part of the job immediately ahead is to create a vast reserve pool of these dehydrated foods for post-war use. Government undoubtedly is prepared to finance the production and accumulation of this reserve.



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## Servant of Freedom

Mighty servant of all America is the great Construction Industry. Now during the war it is helping to crush our enemies. With victory Construction will again serve the peace-time progress of free men.

Already America's vast network of highways, bridges and airports is helping to free men from barriers of distance, time and transportation costs . . . massive dams are making low-cost electricity available to more and more millions, lifting old burdens . . . vast aqua-

ducts and sanitation systems are contributing to our people's health.

With the return of peace, Construction will bring in its train ever new and greater contributions toward the better life for all.

★ ★ ★

Wickwire Rope is proud of the privilege of helping the Construction Industry in its engineering accomplishments . . . in quarries, on highways, in the building of dams, bridges, and structures of all kinds.

### A CHALLENGE

The present shortage of steel, and of wire rope, challenges each member of the Construction Industry to make each length of wire rope now in service last longer than ever before. Every man who uses or handles wire rope can help.

We will be glad to furnish free copies of the helpful book "Know Your Ropes," which pictures the right and wrong ways to use wire rope. **TAKE UP THE CHALLENGE—WRITE FOR YOUR COPY—AND MAKE SURE ANY NEW MEN KNOW THE RIGHT WAYS.** . . . Address Wickwire Spencer Steel Company, 500 Fifth Ave., New York, N. Y.

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# WICKWIRE ROPE

Sales Offices and Warehouses: Worcester, New York, Chicago, Buffalo, San Francisco, Los Angeles, Tulsa, Chattanooga, Houston, Abilene, Texas, Seattle. Export Sales Department: New York City



# WESTERNERS AT WORK...

## Heralding Herold

Arthur P. Herold succeeds Alfred M. Ghormley as president of the Albers Milling Co., Seattle. Mr. Herold joined the



**ARTHUR P. HEROLD**  
Number 1 Albers Man

Earnation Company (Albers' parent company) in 1934, to act as divisional sales manager, and later was promoted to assistant general sales manager. In 1939, he was transferred to Albers Milling Company, as assistant to the president, and after two years was elected vice president, assuming active management of the concern.

## Copper Superintendent

P. D. I. Honeyman, Inspiration, Ariz., has been appointed general superintendent of the Inspiration Consolidated Copper Co. He will continue as smelter superintendent for the International Smelting and Refining Co., Inspiration, a position he has held since 1929. Mr. Honeyman succeeds Richard S. Newlin.

## Lumber V. P.

E. B. Birmingham, general manager and director of the Hammond Redwood Company, Humboldt county, for the past four years, has been named vice president and a director of the Hammond Lumber Company. He will continue as general manager of the redwood operations. Before entering the lumber field, Mr. Birmingham was resident manager of the Fruit Growers Supply Co.

## Army Majors

A. R. Bailey, assistant to the president of Coast Counties Gas & Electric Co., San Francisco, has been commissioned a major in the Army. He will be stationed at the San Francisco port of embarkation at Fort Mason, working as a personnel officer in

the various ports of embarkation. John J. Winn, Jr., commercial manager of the Portland Gas and Coke Co., Portland, Ore. has been commissioned a major in the Engineer Corps.

## Association V. P.

Adrian R. Baish, employe service supervisor for Vultee Aircraft, Vultee Field, Calif., has been elected vice president of the National Association of Foremen.

## M. A. W. President

G. P. Halferty, Seattle, has been elected president of the Manufacturers' Association of Washington. Other officers and trustees are: Frank West and A. W. Engstrom, vice presidents; Frank A. Pritchard, secretary-treasurer; H. J. Beernink, Paul E. Kirker, J. Arthur Thompson and R. P. Thymian, trustees.

Bob C. Hayes, manager of the Manufacturers' Association of Washington, has been commissioned a first lieutenant in the Marine Corps and has been called for active service in the aviation division. He has been succeeded at the Manufacturers'



**G. P. HALFERTY**  
Manufacturers' Chief

Association by Howard L. Barnes, well-known Seattle newspaper and advertising executive.

## Goes to Honolulu

A. J. Hebert, a vice president of California & Hawaiian Sugar Refining Corp., has moved from San Francisco to Honolulu to become chief consulting engineer for Alexander & Baldwin, Ltd., in charge of engineering and technical work for their sugar and pineapple plantations and canneries. He had been with C&H for ten years.

## Westerner Heads A.G.A.

Arthur F. Bridge, vice president and general manager of the Southern Counties Gas Company of California, has been



**ARTHUR F. BRIDGE**  
Gas Association Prexy

elected president of the American Gas Association which held its 24th annual convention in Chicago recently. For the past year, he held the vice presidency.

Mr. Bridge has been associated with the Southern Counties Gas Company since 1919 when he returned from active overseas duty with the A.E.F. He has held the positions of rate engineer, vice president in charge of operations, executive vice president, and his present position.

R. G. Barnett, vice president and general manager of the Portland Gas & Coke Co., Portland, was elected to serve a two-year director term for the A.G.A.

## Directs WLB Research

Calvin Crumbaker, professor of economics at the University of Oregon, has been named Director of Research and Analysis for the Pacific Coast region of the National War Labor Board. He will analyze all applications of employers for permission to increase wages of employes under the Federal Government's wage stabilization program. He will make his headquarters in San Francisco.

## Rationing Commodities

R. E. Morgan heads the miscellaneous commodities rationing division, a newly created post in the Seattle regional branch of the Office of Price Administration. He will work under Floris Nagelvoort, Washington State Rationing Officer. Mr. Morgan has been a department store executive and merchandising and advertising counselor.

## Candy Man

Cecil H. McKinstry, after 20 years with the Imperial Candy Company of Seattle, has been elected president. He entered service with the company when graduated from the University of Washington, and has been assistant general manager and production manager. S. H. McKinstry has been named chairman of the board. Other officers are: C. L. Vanderberg, vice president and sales manager; C. C. Land, secretary-treasurer.

## Stabilization Work

Ernest A. McMillan, formerly a member of the California State Harbor Commission, in charge of the port of San Francisco and a leading figure in the Brotherhood of Railway Clerks, has been appointed deputy chairman of the Shipbuilding Stabilization Committee.

## Building Tanks

James M. Hait has been named general manager of a new division, established by Food Machinery Corporation, which will be known as the Division of Procurement and Engineering. Mr. Hait has been chief engineer of the Peerless Pump Division,



**JAMES M. HAIT**  
Of Amphibian Fame

and is credited with many of the firsts in pump design; however, his diligent work in designing and building amphibian tanks has gained him additional recognition and the new position.

## Projects Engineer

Earl F. Hastings has been appointed assistant director and projects engineer for the Arizona Department of Mineral Resources with headquarters in Phoenix, Ariz. He returned recently from Hawaii where he was excavation superintendent for Hawaiian Constructors.

# Statement of Condition

At the Close of Business December 31, 1942

NOT INCLUDING TRUST FUNDS

| Resources   |                         |
|---|-------------------------|
| <b>CASH</b>   |                         |
| On Hand and with Federal Reserve Bank . . . . .                 | \$78,893,374.36         |
| With Other Banks . . . . .                                      | 24,866,615.69           |
| <b>INVESTMENTS</b> (at not exceeding market value)              |                         |
| U. S. Government Securities . . . . .                           | 240,480,957.45          |
| Other Bonds . . . . .   | 15,255,403.89           |
| Stocks and Other Securities . . . . .                           | 694,685.77              |
| (Including \$480,000.00 stock in Federal Reserve Bank of S. F.) |                         |
| <b>LOANS</b>  |                         |
| Loans and Discounts . . . . .                                   | 39,179,008.26           |
| Loans on Real Estate . . . . .                                  | 6,659,017.34            |
| Customers' Liability for Credits and Acceptances . . . . .      | 3,916,132.39            |
| Bank Premises, Furniture and Fixtures . . . . .                 | 2,939,743.16            |
| Other Real Estate Owned . . . . .                               | 532,794.86              |
|   | <u>\$413,417,733.17</u> |
| <b>Liabilities</b>  |                         |
| <b>DEPOSITS</b>   |                         |
| Demand Deposits . . . . .                                       | 259,205,829.52          |
| Time Deposits (Savings and Commercial) . . . . .                | 111,049,554.32          |
| Public Funds . . . . .  | 19,557,564.24           |
| Letters of Credit, Credits and Acceptances . . . . .            | 4,136,852.82            |
| Reserved for Taxes . . . . .                                    | 778,562.29              |
| Other Liabilities . . . . .                                     | 387,114.59              |
| <b>CAPITAL</b> Paid in . . . . .                                | 9,000,000.00            |
| Surplus . . . . .   | 7,000,000.00            |
| Undivided Profits . . . . .                                     | 2,302,255.39            |
|   | <u>18,302,255.39</u>    |
|   | <u>\$413,417,733.17</u> |

\*\$26,374,149.60 pledged to secure Public and Trust Funds

STATE OF CALIFORNIA }  
City and County of San Francisco } ss.:

A. W. Kohner, Cashier of Wells Fargo Bank & Union Trust Co., being duly sworn, says he has a personal knowledge of the matters contained in the foregoing report of condition and that every allegation, statement, matter and thing therein contained, is true to the best of his knowledge and belief. A. W. Kohner, Cashier

Subscribed and sworn to before me this 4th day of January, 1943. Catherine E. Keith, Notary Public in and for the City and County of San Francisco, State of California.

Correct—Attest: Sidney M. Ehrman, Henry Rosenfeld, W. P. Fuller, Jr.

## DIRECTORS

|                      |                   |                   |
|----------------------|-------------------|-------------------|
| Sidney M. Ehrman     | Arthur D. King    | Wilson Meyer      |
| *James Flood         | Frank B. King     | R. B. Motherwell  |
| *J. A. Folger        | H. G. Larsh       | Henry D. Nichols  |
| W. P. Fuller, Jr.    | Dr. Hartland Law  | Henry Rosenfeld   |
| W. L. Gerstle        | Samuel Lilienthal | R. S. Shainwald   |
| Clara Hellman Heller | E. C. Lipman      | Guy V. Shoup      |
| *F. J. Hellman       | F. L. Lipman      | Frank E. Sullivan |
| *I. W. Hellman       |                   | J. D. Zellerbach  |

\*Is one of our 183 Directors, Officers, and Members of the Staff now on leave for wartime duty.

# Wells Fargo Bank & Union Trust Co.

SAN FRANCISCO

Oldest Bank in the West—Established 1852

Member F. D. I. C.

Send for booklet—BANK BY MAIL



# Western Region Leads In Electric Energy Gains

**A**N INDICATION of the rapid industrial growth of the Pacific Northwest and part of the intermountain territory is given in the Federal Power Commission's report for October 1942, showing that Region VII made the highest increase over October 1941 of any in the country, both in production of electric energy and in demand. States included in Region VII are Washington, Oregon, Idaho and Utah.

The Commission's figures reveal that the gain in production for Region VII was 27.6 per cent over the corresponding month in 1941, while the increase in demand was 18.1 per cent. This compares with nationwide increases of 13 and 7.8 per cent, respectively.

A need of nearly five million kilowatt hours of power for normal use in the Pacific Northwest in 1949 is predicted by Paul J. Raver, Bonneville power adminis-

trator, in his annual report. The rise in demand for Bonneville power for the last six months was 83 per cent. He projected a seven-point program for using power for the industrial expansion of the area as follows:

1. Columbia River power should be sold to such industries and on such terms as help the long run and best development of regional resources.
2. Establishment of basic electro-process industries should be followed by fabricating and supply industries so as to support the operations of the basic industries and to provide products for regional consumption at lower costs than obtain at present.
3. New feasible industries should be financed and managed as far as possible by business men of the region.
4. Research on new processes to use elec-

tric power and raw materials in the region must be stimulated by government agencies and the results of such research should be freely available for use by independent enterprise.

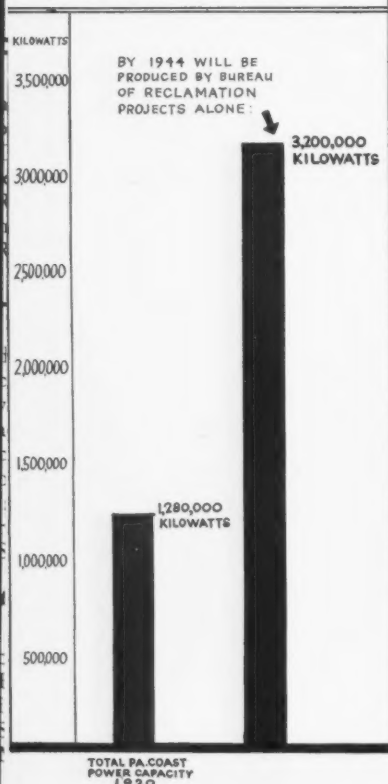
5. Opposition of established industry to new competition from Northwest industry and the attempts of any industrial groups to control large amounts of Columbia River power must be prevented.

6. Within the region, new industries should be encouraged to decentralize in accordance with the advantages of locational factors and of the "postage stamp" rate of the regional network.

7. Columbia River power should be sold on such terms as contribute to the conservation of other resources of the region and to prevent the destruction of scenic and recreational assets.

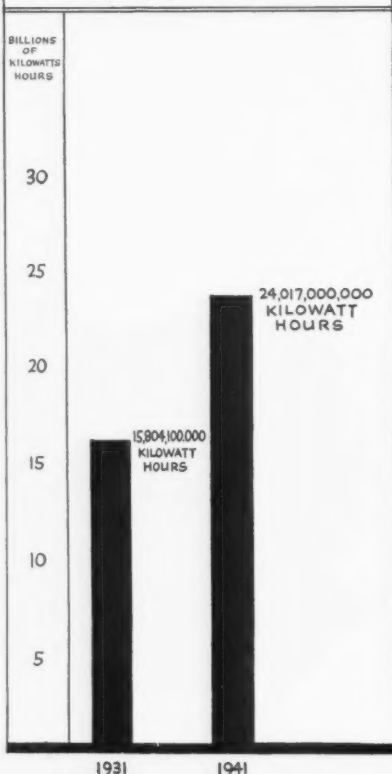
## ELECTRIC POWER PRODUCTION IN WEST

BUREAU OF RECLAMATION SOURCES ALONE  
**2½ TIMES GREATER THAN TOTAL WESTERN PRODUCTION IN 1920**  
SOURCE: FEDERAL POWER COMMISSION



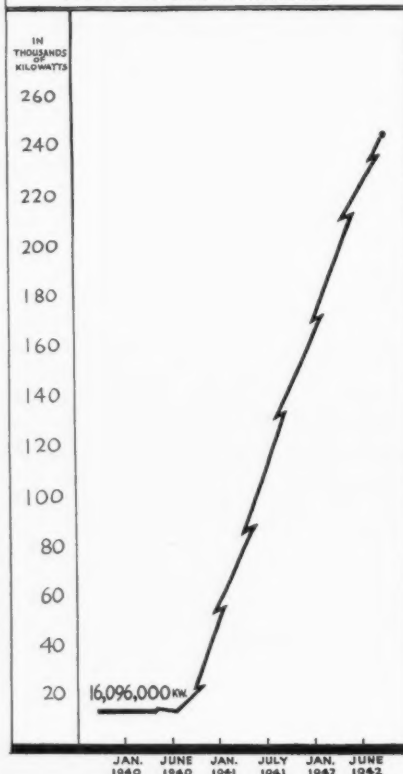
## ELECTRIC ENERGY CONSUMPTION IN ELEVEN WESTERN STATES

58% INCREASE IN 10 YEARS  
SOURCE: FEDERAL POWER COMMISSION



## ELECTRIC ENERGY CONSUMED BY ELECTRO-PROCESS INDUSTRIES OREGON - WASHINGTON

JAN. 1940 - JULY 1942  
SOURCE: U.S. DEPT OF INTERIOR



## WPB Crack-Downs

For violating the WPB order prohibiting sale or delivery of new metal plumbing and heating equipment, Pioneer Supply Company was denied all priority assistance for six months by WPB Compliance Division and any further sales, deliveries or trading prohibited. . . . Ossipow Electric Supply Company, Los Angeles, charged with filling unrated wholesale orders for 769,005 feet of copper wire, practically all in wilful violation of preference order M-9-a, no priority ratings for materials under any circumstance until WPB decides differently. . . . Arizona Wholesale Electric Company, Phoenix, no priority assistance or allocation of materials for the next six months, for selling more than 157,000 feet of copper wire on orders not bearing required ratings, and for misusing A-10 rating under P-100 for purchasing more than 500,000 feet of wire, about 10,000 feet of conduit and 30-odd electrical items, certifying they were for maintenance, repair and operating supplies. . . . Palmer Manufacturing Corporation, Phoenix, for selling substantial number of evaporative-type coolers, in violation of L-38 limiting production of refrigeration and air-conditioning equipment, deprived of priority and allocation assistance for six months. . . . Dubin Fixture Manufacturing Company, Los Angeles, three months for vio-

lating L-38 by manufacturing bottled beverage coolers and ice-cream cabinets without WPB authorization. . . . Angeles Apparel Company, Los Angeles, forbidden to use any cloth in manufacture of lounging wear for three months, for making up 8,000 yards of material into more than 2,000 women's lounging robes, the sweep of which was greater than permitted by general limitation order L-118.

## More Sponge Iron

Washington State may be selected as the location for a pioneering plant for the production of sponge iron, according to Congressman Henry M. Jackson, a member of the House sub-committee charged with the investigation of the nation's steel shortage. Tests are to be made on 100 tons of ore from the Kaiser properties at the pilot plant of the U. S. Bureau of Mines at Boulder City, Nev., and the results may determine location of a large-scale plant in that state.

## Enlarging Plants

Lockheed-Vega aircraft plants in Burbank, California, have taken out building permits for \$653,000. These include \$594,000 for a storage building, \$27,000 for a combustible storage building, \$17,000 for a paint shop and \$15,000 for a boiler house.

## Garments For Women Workers

All of the garments pictured on page 10 of the January issue of *Western Industry*, where suitable working styles for women were displayed by some of the workers at the Oregon Shipbuilding Corporation yard in Portland, were manufactured by the Hirsch-Weis Mfg. Co. of Portland.

The were made under the "White Stag" label of Hirsch-Weis and were either wholly designed by that company, or, as in the case of the "Function-all" garments (listed as No. 4 and No. 6 in the article on page 11 of the January issue), by Hirsch-Weis in collaboration with the women workers of the Oregon Shipbuilding Corporation.

It was incorrectly stated in the article on page 11 referred to above that the girls who modeled the garments were from Oregon State College. Instead, they were from the Oregon Shipbuilding Corporation yards. The initials "OSC" are used for both the shipyard and the college, and the confusion resulted from the double usage. To be sure, some of the girls may have been Oregon State College students as well as shipyard workers, so the description of them in the January issue may not have been 100 per cent incorrect.

**BILLBOARDS IN  
THIRTY  
CITIES**

*Put a Roof over a Warworker's family!*

**RENT YOUR SPARE SPACE NOW FOR CASH!**

**REMODELING MATERIALS AVAILABLE!**

*Phone WAR HOUSING CENTER SU. 6867 Immediately*



Here is the billboard poster which we are contributing to speed up war production throughout the West. It is appearing in cities where housing conditions for workers have been officially designated as "critical."

**W. P. FULLER & CO.**

**To Executives of Western Industry:** If you are planning a housing drive, we will gladly supply the following:—color reproduction of billboard on 35" x 14" stock, also on 9" x 4" blotters. Small quantities free, larger quantities at cost. For painting this design on walls, fences, etc., we will supply lettering and coloring guide—with Fuller can removed. Write W. P. Fuller & Co., 301 Mission St., San Francisco.

# Moving the Personnel In Blacked-Out Plant

**A**ISLES must be straight, of ample width and kept clear at all times if the Luminous Plan of personnel movement through a blacked-out plant is to be used effectively.

Luminous arrows that glow with a green light are painted on the floor six inches outside of the aisle markings at 15-foot intervals. These arrows should be about 18 inches long and three inches wide, with the shaft pointed to direct traffic in the proper direction. Curved arrows are used at the turns and stairways are marked with a zig-zag line and an arrow pointing either up or down. Firefighting apparatus is marked with some distinguishing character which is easily recognized. Sand, telephones, switches, ladders, etc., in a similar manner.

Markings with patches of blue luminous paint are used to designate those things near aisles that constitute a tripping hazard. In short, follow the green and avoid the blue.

It is found by experience that where large groups of people are leaving a building, only those persons in the front can definitely see the arrows.

To overcome this difficulty, it is suggested that each employee be trained to place his hands on the shoulders of the man ahead or that a luminous sash cord be suspended over the center of the aisle. This

\*General Manager, Keete Engineering Co., Hollywood; Staff Member, Lighting Coordination Committee of the Illuminating Engineering Society.

By JOHN T. SHANNON\*

cord must be located under the lower edge of the artificial light sources, since luminous materials of this character are activated by the general lighting of the buildings.

The foregoing suggestions in no way interfere, in our belief, with present rulings or future requirements pertaining to the black-out.

The following materials may be purchased on the open market for these purposes:

1. A rather expensive, non-dangerous, radio-active powder and paint which might be called a low-grade variety. It is self-active, harmless if kept out of the mouth, long lived, and requires no excitation.
2. A brilliant green powder and paint which is very bright for a matter of 10 or 15 minutes, fairly bright for the next half-hour to one hour.
3. A brilliant blue powder and paint, which is very bright for one-half to one hour, and is still visible to a dark-accustomed eye after 10 hours.

These materials are definitely recommended for interior use provided their quality is good. There are numerous materials of this character on the market, the quality of which is doubtful. They should be purchased only from legitimate concerns, and on a guarantee of performance.



• Development of a plywood "Victory Drum" for use in marketing greases will enable Standard Oil Company of Indiana to save for war uses 2,000 tons of steel a year, equal to 40 tanks or 50,000 machine guns

4. There is an extremely low-priced powder and paint, of a lower brilliance, which may be used where it is desired to cover large areas, especially exterior markings. This low-priced paint is valuable for such purposes when properly applied and handled.

In general the above materials are excited by 30- to 50-foot candles of any natural or artificial light source, such as the light used in the plants for their visual purposes.

It is to be remembered that this material should only be applied in accordance with proper directions from the responsible individuals who supply the materials and who are assumed to be familiar with the uses.

## ELIMINATE HOT BEARINGS and OTHER LUBRICATING PROBLEMS

with **MOTOR MICA**

TRADE MARK REG. U. S. PAT. OFF

★ Motor Mica Anti-Friction Compound fills tiny pores and scratches on all frictional parts. COOLS HOT BEARINGS. Saves vital time and costly repairs, makes machines run better, steadier, longer. A little goes a long way.

### Proved by Actual Tests!

Tests by Armour Institute Engineer on bearings run for 90 minutes showed: (1) 25% heat increase and friction nearly doubled with good grade lubricant; (2) NO HEAT INCREASE and 84% LESS FRICTION INCREASE when MOTOR MICA was added.

The above impartial test offers convincing proof that Motor Mica will solve your most stubborn lubricating problem. Copies of this test and others are yours for the asking.

Manufactured and sold only by

ORDER DIRECT FOR IMMEDIATE DELIVERY } **SCIENTIFIC LUBRICANTS CO.**  
3462 NORTH CLARK ST. CHICAGO, ILLINOIS



Packed in 5-10-25-50-100 lb. Containers

USED IN AMERICA'S BIG WAR WORK PLANTS for

- METAL WORKING
- STAMPING
- DRAWING
- TURNING
- DRILLING
- MILLING
- THREADING
- TAPPING
- BORING
- DIE CASTING
- SCREW MACHINES
- COUNTLESS OTHER OPERATIONS

## Douglas Fir Best Cork Substitute

With imports of Mediterranean cork becoming progressively restricted, the most likely domestic substitute is found in the bark of Douglas fir, according to W. D. Hagenstein, forest engineer of the West Coast Lumbermen's Association and the Pacific Northwest Loggers Association.

A raw material suitable for the manufacture of bottle cap liners, linoleum and insulating board has been produced in the last few months by the College of Forestry of the University of Washington, he told the Vancouver Section of the Canadian Society of Forest Engineers at their November meeting.

Western Washington alone has a potential annual productive capacity of 100,000 tons of granulated Douglas fir cork, which is one-half the annual national consumption of Mediterranean cork for all purposes, according to a cooperative survey by the College of Forestry and the West Coast Lumbermen's Association.



## Trucking Situation Becomes Critical

Lack of spare parts, drivers and shopmen, which have been hampering trucking operations in the West for a year or more, has reached the critical stage, where equipment is being laid up and movement of materials for the war effort has begun to suffer. Deferment of men has now been promised, helping the situation to some extent.

Manufacture of automotive truck parts in the West in greater volume than ever before may be a possible outcome of the current shortage that is seriously affecting Western trucking operations. Statistics on the volume of parts needed are being gathered by area maintenance committees appointed by Harold Arnot, Pacific Coast regional manager of the ODT, and some observers predict this will provide the opportunity for Western manufacturers to develop business in crank shafts, transmissions, gears, etc., that can be continued after the war. The area committees cooperate with committees set up in individual industries to supply technical information on maintenance and other means of alleviating the current situation. So great has been the increase in truck tonnage that it has offset attempted mileage economies.

IN SAN FRANCISCO

it's the

*St. Francis*



Superb accommodations, fine cuisine, and distinctive service await today's travelers at this city's largest, best located hotel.

1000 ROOMS • 1000 BATHS  
FROM \$4 SINGLE • \$6 DOUBLE

HOTEL  
**ST. FRANCIS**

OVERLOOKING UNION SQUARE  
AND THE NEW GARAGE  
MANAGEMENT DAN E. LONDON

# MEMO

TO: SHOP FOREMAN

## NEW DISCOVERY SPEEDS GEAR LUBRICATION

Gearite -- Union's new grease -- for exposed gears -- is a lubricant in a solvent. When you apply Gearite, the solvent washes away the old deposits of grease and dirt -- evaporates -- and leaves just the right amount of new grease on the gear teeth. Because you don't have to heat it, Gearite makes lubrication simple, quick. You get the right amount in the right place. You don't waste any.

Gearite is far cleaner than most gear lubricants. Because it is applied in a thin layer, it does not collect dirt. It can be applied with either a spray gun or by the drip-feed method to tough lubrication points ordinarily difficult to reach. Furthermore, Gearite will remain on gear surfaces even during long periods of idleness. It is tacky, hence will not throw off.

For further information about Gearite, see your nearest Union Oil representative. He'll gladly give you a demonstration.

UNION OIL COMPANY

# LABOR

## AND THE INDUSTRIAL WEST

### F.R. Says Work Must Not Stop

Evidence that the government does not intend to let labor disputes interfere with war production has come from no less a person than President Roosevelt himself, who ordered AFL and CIO machinist unions in the San Francisco Bay district to get their men back on the jobs, after Army, Navy and Maritime Commission had advised him that shipments of men and supplies to fighting fronts had been delayed by a walkout.

CIO machinists had been fined for working the Saturday and Sunday after Christmas and ordered by their union not to report for work. The dispute involved Saturday and Sunday overtime. The War Labor Board also condemned AFL local officials for threatening a strike at the Joshu Hendy Iron Works unless the Board acted promptly in a case involving rates for women at that plant.

### Kaiser Urges Change

Henry J. Kaiser has urged Congress to give the Wagner Act a thoroughgoing review, because it fosters jurisdictional warfare and is "the most serious obstacle in the way of war production." He says that the competition for advantage in organizing millions of wage earners had become so ruthless that it threatened peace and safety and would severely handicap post-war recovery. Mr. Kaiser called for modification, not repeal, saying the act protected labor in collective bargaining but prejudiced the fair and reasonable interests of the public and of employees.

### Lumber Increase

• A wage increase of 7½¢ an hour to 65,000 lumber and plywood workers in Oregon and Washington has been awarded by the West Coast Lumber Commission, bringing the minimum up to 90¢. Retroactive to May 1 for AFL contract workers, because the AFL contract expired then, and to Sept. 1 for all others, except where contracts specifically provide otherwise, as this was the approximate date of the War Labor Board's freezing order. Back pay

will be paid in war bonds and stamps and goes only to those now in the industry or to those who return in 30 days, except workers now in the armed forces or who left jobs due to "causes beyond their control." Swing shift plywood workers will get 4¢ an hour differential, graveyard shift 7¢. Commission explained that new scale is still 5¢ below shipyards because shipyard work probably will end when the war is over.

### Here And There

AFL machinists at Consolidated Aircraft, San Diego, asked President Roosevelt to release them from their no-strike pledge so they can authorize a walkout to enforce demands for higher wages, claiming this was in protest against constant delays and broken promises brought about by activities of Paul Porter, government's representative in aircraft wage case. . . . Lockheed-Vega employees abandoned similar plans and decided to wait for natural course of the case. . . . San Diego's last remaining large reservoir of labor contains only 9300 women with no child-care problem to cause absenteeism, U. S. Employ-

ment Service finds. . . . War Labor Board declined to extend existing arbitration procedure to cover disputes over transfers or promotions of Atlas Powder Company employees at Giant, Calif., because hazards of making explosives necessitates letting responsibility of making job assignments rest with management, although joint grievance committee was ordered established to provide opportunity for settlement. Voluntary maintenance of membership clause ordered inserted in the contract. . . . WLB in Santa Barbara city employee wage dispute case ruled it has no power to decide disputes involving municipal agencies and their employees. . . . AFL electrical workers withdraw petition to National Labor Relations Board to take jurisdiction over dispute with L. A. Department of Water and Power. . . . Douglas Aircraft institutes special 10-minute rest period morning and afternoon in three California plants. . . . NLRB directs Willard Storage Battery officials at Los Angeles to conduct employee election to determine whether workers wish to be represented in collective bargaining by CIO, Willard Employees Association or by neither. . . . NLRB designates AFL Metal Trades Council as the bargaining agency for production and maintenance employees of Food Machinery Corporation at Riverside. . . . State Labor Commission decided complaint of unfulfilled promises to two New York accountants hired by Richmond shipyards insufficient for action. . . . Colorado Supreme Court upheld state industrial accident commission in six cases that refusal of miners to work until certain demands were guaranteed constituted a strike and the miners therefore were not eligible for unemployment compensation.

## SHIP BUILDERS

and

## SHIP REPAIRS

Machinists

Boilermakers

Pipefitters

Coppersmiths

Electric Welders

*Equipped to handle the largest repair jobs*

## ALBINA ENGINE & MACHINE WORKS

INCORPORATED

PORTLAND

OREGON

## War Labor Board

• Decentralization of War Labor Board proceedings, so that decisions on all labor disputes and two-thirds of the applications for voluntary wage and salary adjustments will be made in the WLB regional offices, subject to review at Washington, includes the setting up of public, labor and industry panels in the following regions: Seattle-Puget Sound, Portland, Northern California-Nevada, Southern California-Arizona. Regional directors will have the authority to make final wage or salary adjustment decisions for all employers of not over 100 persons, subject to appeal to a tripartite regional panel. Dispute cases will be heard at or near the scene of the dispute for the convenience of the interested parties. Other intermountain territory is included in a region with headquarters at Denver.

## Mining Industry

The Nonferrous Metals Commission has been organized under the War Labor Board to stabilize labor relations and promote production of war-essential minerals in the 11 western states, following the pattern of the commission for the Pacific Coast lumber industry. Headquarters are at 306 Midland Savings Bldg., Denver. Charles A. Graham, acting regional WLB director in Denver, is chairman, John E. Gorsuch, Denver attorney, vice-chairman, and James M. Burns, former assistant to the president of Williams College, executive secretary.

Labor representatives are James F. O'Brien, president of the metal trades council (AFL) at Butte, Montana, and A. E. Stevenson, secretary of the Cleve-

land, Ohio, industrial union council (CIO). Industry representatives are Henry M. Hartmann of Salt Lake City, Utah, and S. M. Thompson, president of the Cap Rock Coal Company of Denver.

## Favor Air Increase

• When the public hearing on the West Coast aircraft wage case was held in Washington January 8, the industry announced acceptance, with minor objections, of the 6¾c an hour increase recommended by Paul R. Porter, special representative of the Board. The AFL machinists attacked the report, however, and both the union and the companies disagreed with Porter's proposal to establish uniform job classification and grades. His recommendation for the Boeing factory in Seattle increase is 7c, i.e., a rate of 65c for beginners and 5c an hour increase each week for four weeks, until 85c is reached. This is 2c a hour above the Southern California scale, which is to cover office, technical and supervisory workers as well as those in the factory. Hearings are being held in Los Angeles for the aircraft parts industry.

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# THE WEST ON ITS WAY

*This is only a partial list of the industrial projects throughout the 11 Western States*

## ARIZONA

**BAGDAD COPPER PRODUCING**—Bagdad Copper Corp., Hillside, will start full production at their new plant when the power line from Parker Dam is completed. An output of 2,500 tons of copper and molybdenum daily is expected.

**MESS HALL**—Paul E. Griffin, 7219 Sepulveda Blvd., Van Nuys, Calif., will construct a civilian mess hall in Yuma county at a cost of less than \$50,000. Negotiated contract by U. S. District Engineer Office, Los Angeles, Calif.

**TEMPORARY BUILDINGS**—E. W. Duhamel, 3719 No. Central Ave., Phoenix, will construct additional temporary buildings in Maricopa county. Contract for more than \$100,000 by U. S. District Engineer Regional Office, Phoenix.

**ADMINISTRATION BUILDING**—Foster & Hanly 517 No. Campbell Ave., Tucson, have been awarded a contract by the U. S. District Engineer Regional Office, Phoenix, in an amount less than \$50,000 for construction of an administration building at a reception center in Pinal county.

**AIR CONDITIONING**—Del E. Webb Construction Co., Phoenix, have been awarded a negotiated contract by U. S. District Engineer Office, Los Angeles, for air conditioning a building at a flying school in Yuma county.

**BUILDINGS AND UTILITIES**—Gerelink Co., 3145 West Eighth St., Los Angeles, have been awarded a \$500,000 contract by the U. S. District Engineer Office, Los Angeles, for construction of buildings and utilities at an operating base in Yuma county.

## CALIFORNIA

**STARTING EXPANSION**—American Pipe and Steel Corp., Alhambra, have obtained a permit for a \$35,000 warehouse building to be located at 230 So. Date Ave. Eventually, a \$200,000 expansion move is planned.

**DECOTO CANNERY SOLD**—Martin Wilms has taken over the cannery operated by Joe Pearce in Decoto. The winter spinach pack is now under way with about 175 men and women employed.

**EQUIPPING PLANT**—The California Rock Salt Co., Los Angeles, have been authorized by the Defense Plant Corp. to equip their plant at a cost of more than \$300,000.

**STANDARD BUYS CHEMICAL CORP.**—Standard Oil Company of California has purchased California Spray-Chemical Corporation stock, acquiring voting control. The company, located in Antioch, manufactures chemical sprays.

**HOTEL TO HOSPITAL**—Leeds, Hill, Bernard & Jewett, 601 West Fifth St., Los Angeles, have been awarded an architect-engineer contract by the U. S. District Engineer Office, Los Angeles, for preparation of plans for converting a hotel into a hospital in Los Angeles county.

**ADDITIONAL FACILITIES**—Douglas Aircraft Co., Inc., Santa Monica, have been granted authorization by the Defense Plant Corp. for additional production facilities to cost \$300,000.

**SHELTERS**—O. L. Carpenter, P.O. Box 805, Santa Ana, has been awarded a \$50,000 contract by the U. S. District Engineer Regional Office, San Diego, for the construction of shelters in San Diego county.

**DEHYDRATING PLANT**—Hayward Reed has purchased the large dehydrating plant on highway 99-E south of Live Oak. He expects to operate it in processing fruits and vegetables to whatever extent the government's food production plans require.

**FARM CAMP**—Midstate Construction Co., 251 Kearny St., San Francisco, has been awarded a \$68,928 contract by the U. S. Department of Agriculture, Los Angeles, for the construction of an industrial farm camp southeast of San Clemente in San Diego county.

**PRODUCING AMPHIBIAN TANKS**—Food Machinery Corp., Riverside, engaged in the production of amphibian tanks for the navy, will expand, at an approximate cost of \$50,000.

**MESS HALL**—P. A. Weeger, 4565 Santa Monica Blvd., Los Angeles, will construct a mess hall at an Air Corps Ferrying Command in Los Angeles county. Contract for less than \$50,000 by U. S. District Engineer Office, Los Angeles.

**EIGHT BARRACKS**—Cameron & Tarnutzer, 450 No. Camden Drive, Beverly Hills, will construct eight barracks buildings in Los Angeles county. Contract at less than \$50,000 by U. S. District Engineer Office, Los Angeles.

**ENGINE TESTING**—Jas. I. Barnes Construction Co., 119 Montana Ave., Santa Monica, will construct an engine test building at an air depot in San Bernardino county. Contract for about \$1,000,000 by U. S. District Engineer Regional Office, San Bernardino.

**STORAGE AREAS**—David J. Reed, 6348 Colgate Ave., Los Angeles, will construct open storage areas and facilities in Los Angeles county. Contract for less than \$100,000 by U. S. District Engineer Office, Los Angeles.

**EQUIPPING PLANT**—The Airox Co., Los Angeles, have been authorized by the Defense Plant Corp. to equip their plant at a cost of more than \$100,000.

**WELDING SCHOOL**—MacDonald & Kahn Co., Ltd., Financial Center Bldg., San Francisco, will construct a welding school for the Bethlehem-Alameda Shipyard, Inc., Alameda.

**MOTOR REPAIR SHOP**—Allied Contractors, Inc., 9700 West Pico Blvd., Los Angeles, will construct a motor repair shop at a camp in San Luis Obispo county. Contract at \$50,000 by U. S. Engineer Office, Los Angeles.

**AIRPORT PAINTING**—Foster & Kleiser Co., 1550 West Washington Blvd., Los Angeles, have been awarded a contract at less than \$50,000 for painting at an airport in Los Angeles county. Award by U. S. Engineer Office, Los Angeles.

**COLD STORAGE**—Hal Crumly, 716 East Fifth Ave., Pomona, has been awarded a contract by the U. S. District Engineer Regional Office, San Bernardino, for construction of cold storage facilities in San Bernardino county.

**INCINERATOR**—Biltrite Incinerator Co., 2280 W. Washington St., Los Angeles, will furnish and install a portable incinerator at the U. S. Post Office, San Diego. Contract by District Engineer, U. S. Public Buildings, Oakland.

**LAUNDRY WAREHOUSE**—Coast Counties Construction Co., Salinas, will construct a laundry warehouse at an army camp in Central California. Negotiated contract awarded by U. S. Army Engineer Office, District Engineer, San Francisco.

**HANGAR BUILDING**—Guy E. Hall, 1326 Thirtieth St., Bakersfield, has been awarded a contract for less than \$50,000 by the U. S. Army Engineer Office for the construction of a hangar building in Central California.

**SPACE HEATERS**—M. L. Marvin, 7600 Avalon Blvd., Los Angeles, will install approximately 1,300 space heaters in various locations in Los Angeles county. Contract for less than \$50,000 by U. S. District Engineer Office, Los Angeles.

**FIRE STATION**—Schnabel & Arend, 3477 Olympic Drive, Los Angeles, will construct a fire station in Riverside county. Contract for less than \$50,000 by U. S. District Engineer Regional Office, San Bernardino.

**SUPPLY BUILDINGS**—J. O. Olthmans & Son, 810 East 18th St., Los Angeles, have been awarded a contract by the U. S. District Engineer Regional Office, San Bernardino, for construction of foundations for supply buildings at an air depot in San Bernardino county.

**REBUILDING BURNT MILL**—Mt. Whitney Lumber Co., Johnsondale, which was destroyed by fire early in December at a loss of approximately \$100,000, will be rebuilt.

**SHIPYARD EXPANDING**—Consolidated Steel Corp., Long Beach, has been granted permission to extend its working area at the Craig plant in an easterly direction to provide for two full ship ways.

**MISCELLANEOUS BUILDING**—Central Building Co., 707 So. Broadway, Los Angeles, \$50,000 contract for housing in Orange county, by U. S. District Engineer Regional Office, Riverside.

**DeCamp-Hudson Co.**, 1277 West 24th St., Los Angeles, \$50,000 contract for moving and reconstructing buildings at various locations in Los Angeles county. By U. S. Engineer District Regional Office.

**Carl J. Fung & Co.**, 700 Sacramento St., San Francisco, for construction of housing at a receiving station in San Francisco area. Negotiated contract from U. S. Army Engineer Office, San Francisco.

**W. D. Haxten**, 4271 Landis, San Diego, \$50,000 contract for construction of building in San Diego county. By U. S. District Engineer Regional Office.

**Heyman Bros.**, 564 Market St., San Francisco, \$100,000 contract for buildings in Contra Costa county. By U. S. Army Engineer Office, Sacramento.

Carl N. Swenson Co., 355 Stockton Ave., San Jose, \$100,000 contract for buildings in Sacramento county. By U. S. Army Engineer Office, Sacramento.

G. W. Williams Co., 10 California Drive, Burlingame, \$100,000 contract for buildings at an army camp. By U. S. Army Engineer Office, District Engineer, Sacramento.

Trewhitt, Shields & Fisher, 1501 Pacific Southwest Building, Sacramento, \$100,000 contract for buildings at an airfield in Fresno county. By U. S. Army Engineer Office, District Engineer, Sacramento.

## COLORADO

**HOUSING PROJECT**—Mead & Mount Construction Co., 422 Denver National Bldg., Denver, have been awarded a \$505,000 contract by the Federal Public Housing Authority, Kansas City, Mo., for construction of a 190-unit housing project in La Junta.

**TEMPORARY MILITARY BUILDINGS**—John W. Joynt Construction Co., Tucson, Ariz., have been awarded a contract at less than \$1,000,000 by the U. S. Army Engineers, Albuquerque, for construction of temporary buildings at a military site in Las Animas county.

**UTILITY SYSTEMS**—P. & E. Construction Co., Houston, Tex., will install utility systems at a military site in Las Animas county. Contract between \$100,000 and \$500,000 by U. S. Army Engineers, Albuquerque, N. M.

**68-UNIT HOUSING**—Frank W. Cassidy, Uravan, will construct a 68-unit frame housing project in Uravan. Contract by Federal Public Housing Authority, Kansas City, Mo.

**COLD STORAGE**—Newstrom-Davis & Co., 2000 West Eighth Ave., Denver, will construct additional cold storage facilities in Denver county. Contract for less than \$50,000 awarded by U. S. District Engineer Office, Denver.

**ADMINISTRATION BUILDINGS**—Frank M. Kenney, 56 Steele St., Denver, will construct a guard administration building and student registration booth in Denver county. Contract by U. S. District Engineer Office.

**44-UNIT HOUSING**—C. D. Poland, Grand Junction, has been awarded a negotiated contract by the Federal Public Housing Authority, Kansas City, Mo., for the construction of a 44-unit frame housing project in Rifle.

**THEATER**—Mead and Mount Construction Co. will construct a permanent type theater with 1,038 seating capacity in Denver county. Building will be of brick, concrete and stucco, and will cost more than \$100,000. Contract by U. S. District Engineer Office, Denver.

## IDAHO

**AIR FORCE INSTALLATION**—The War Department has authorized construction of an Air Force installation at Mountain Home to cost in excess of five million dollars. Construction will be under the supervision of the Portland, Ore. District Office of the Corps of Engineers.

**MILITARY BUILDINGS**—J. W. Brennan, Pocatello, will construct buildings and appurtenant work at a military site in Power county. Contract for about \$200,000 awarded by U. S. Army Engineers, Portland.

**MISCELLANEOUS BUILDING**—Kimble Construction Co., 1723 Sherman, Couer d'Alene, will construct buildings, sidewalks, service connections, drainage, water distribution system and electrical facilities in Power county. Contract for more than \$100,000 by U. S. District Engineer Office, Portland.

**MILITARY BUILDINGS**—C. M. Merrill & C. H. Elle, Pocatello, have been awarded a contract by the U. S. Army Engineers, Portland, for construction of buildings at a military site in Power county.

## MONTANA

**TIMBER BRIDGE**—Walter Mackin, Billings, has been awarded a \$25,954 contract from the Montana highway commission for construction of a temporary untreated timber bridge across the Yellowstone river near Columbus.

**HOUSING UNITS**—Cahill-Mooney Construction Co., Butte, has been awarded a contract by the Federal Public Housing Authority for the construction of 100 family housing units at Anaconda.

## Your Chemical Reporter



In these fast changing times, it is most difficult for any of us to keep fully posted on all of the regulations and developments pertaining to the chemical industry. This monthly column will attempt to keep you fairly up to date on news of chemicals especially as it affects the West. We hope you will find this column interesting and of value.

### ODT No. 18

The recent Directive No. 5 to ODT 18, now allows certain fertilizers, including superphosphate, to move in carloads of 30 ton minimums. Its interpretation of "multiple" carloadings is that two or more tariff minimums constitute compliance with the Order, even though the combined weight is less than the car capacity.

### Priorities Tips

**SULPHURIC ACID** has been under allocation control since December 5, 1942. However, WPB's Conservation Order M-257 has not as yet set up detailed allocation machinery but simply gives the Director General for Operations power to allocate and control the distribution of Sulphuric Acid as he shall deem necessary. For the immediate present, it is to be assumed that allocation control will be aimed at doing away with long distance hauls and cross hauls, but Sulphuric Acid consumers should watch for revisions of or amendments to this order which might affect their supply of Sulphuric Acid.

**CARBON TETRACHLORIDE** consumers have been given another break by WPB. Effective January 9 and extending through December 31, 1943, users of Carbon Tetrachloride who are granted B-2 ratings under Conservation Order M-41 (this includes dry cleaners) will be allowed to purchase, in any one month, an amount of Carbon Tetrachloride equivalent to 100% of their average monthly consumption during the 12 months' period ending September 30, 1941. This doubles the amount of solvent available to Carbon Tetrachloride users with B-2 ratings as the original M-41 order limited them to only 50% of their former average monthly consumption.

**ALL INDUSTRY** is due for a very severe headache along about the second quarter of 1943 when the Controlled Materials Plan (call it CMP) begins to make itself felt. You should familiarize yourself with the operation of the plan as it will affect all businesses, large and small, either directly or indirectly. Also, watch for the issuance by WPB of a "master" limitation order ("L" order). This will be the guillotine which will chop off all non war-essential production. It may put you out of business unless your product is on the "approved list" or unless you can subsequently have your product approved by WPB.

### No Priority Needed!

Sulphur is still the sparkling sedative for priority nerves, speaking figuratively, of course. Remember, there is no priority routine necessary to buy sulphur. Reason: the supply is ample for all predictable demands. Uncle Sam does not frown on advance buying of sulphur as hoarding. Such purchasing now is deemed beneficial to the war effort in spreading the transportation load and subsequently easing the rising transportation burden that is approaching in hand with Spring.

### Thoroughly Wash Your Carboys!

Many users of commercial acid when returning empty carboys, leave from one to twenty pounds of acid in the container. This is very hazardous inasmuch as the acid is liable to splash, thereby injuring persons handling the package. Carboys should be thoroughly washed with water and drained before being returned. Be considerate of our freight handlers these hectic days!

Your Chemical Reporter will bring you helpful chemical information each month through the courtesy of Stauffer Chemical Company, San Francisco, Los Angeles and North Portland.

## THE WEST ON ITS WAY

**TEMPORARY HOUSING**—Dudley-Anderson Co., Great Falls, has been awarded a contract by the Great Falls Housing Authority for the construction of a 100-unit temporary housing project adjacent to Parkdale District in Great Falls. Cost will be \$306,254.

**HOUSING**—Cahill-Mooney Construction Co., Butte, has been awarded a contract by the Federal Public Housing Authority for the construction of 100 family housing units at Great Falls.

## NEW MEXICO

**DEPOT BUILDING**—E. S. McKittrick Co., Inc., 7839 Santa Fe Ave., Huntington Park, will construct additional building and facilities at a depot in New Mexico. Contract awarded by U. S. District Engineer Office, Albuquerque, at less than \$100,000.

**WAAC HOUSING**—Stubblefield & Daugherty, Pecos, Tex., have been awarded a negotiated contract at \$100,000 for construction of WAAC housing and facilities in Reeves county, by U. S. District Engineer Office, Albuquerque.

**WAAC HOUSING**—Murphy-Keith Building Co., 411 East Third St., Tucson, Ariz., will construct WAAC housing and facilities in Lea county. Contract for less than \$100,000 by U. S. District Engineer Office, Albuquerque.

**WAAC HOUSING**—M. M. Sundt Construction Co., 440 So. Park Ave., Tucson, Ariz., have been awarded a \$100,000 contract by the U. S. District Engineer Office, Albuquerque, for construction of WAAC housing facilities in Otero county.

**WAAC HOUSING**—K. L. House Construction Co., 214 East Marquette Ave., Albuquerque, have been awarded a negotiated contract by the U. S. District Engineer Office, Albuquerque, for construction of WAAC housing and facilities in Luna county. Cost at \$100,000.

**MORE BUILDINGS**—F. D. Schuffebarger, 200 East Central Ave., Albuquerque, has been awarded a \$500,000 contract by the U. S. District Engineer Office, Albuquerque, for the construction of additional buildings in Otero county.

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## NEVADA

**BUILDINGS**—Haddock Construction Co., 3578 East Foothill Blvd., Pasadena, Calif., will construct a group of buildings with utilities in Nye county. Contract for more than \$1,000,000 by U. S. District Engineer Office, Sacramento.

## OREGON

**AIRPORT**—The Austin Co., Dexter Horton Bldg., Seattle, are completing an airport in North Bend under navy supervision. Cost was approximately \$1,500,000.

**CHROME PLANT**—The Humphreys Gold Co.'s pilot plant for extracting chromite from Coos county beach sands has proved satisfactory, and plans are under way to build a master plant of the movable type. It probably will be located north of Bandon where major ore deposits are located.

**CANTONMENT**—Smith, Wright & Hoffman, Portland, have been awarded a negotiated contract at \$4,000,000 by the U. S. Army Engineers, Portland, for construction of a 9,000-man cantonment in Oregon.

**RESCUE TUGS**—Krusse & Banks shipyard, North Bend, are starting on the first of two rescue tugs to be built for the navy. The tugs will be larger than minesweepers, and will cost \$645,000 each.

**MILL MOVES**—The Knot Pine Mills Sisters unit is moving to Redmond where the site is being enlarged. Operations are expected to start about January 20, according to Bert Peterson, owner.

**SELS MATTRESS PLANT**—Washington Furniture Manufacturing Co., Seattle, has purchased the Kimpton Western Mattress Co. plant and business in Portland at an approximate price of \$85,000. Portland plant employs a staff of 30 people.

**FENCING**—A. A. Tieslan and C. T. Malcom and Hauser Construction Co., Portland, have been awarded contracts by the U. S. Engineers, Portland, for the construction of fences and gates near Salem. A similar contract to the American Steel & Wire Co., Cyclone Fence division, for work at Corvallis.

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## THE WEST ON ITS WAY

**WATER SYSTEM**—Ertz Burns & Co., Lorenz Bros., D. M. Drake and Parker-Schram, Portland, will install a water system in Benton county.

**LEASE PACKING PLANT**—The Rode, Myer and Rode Packing Co., Union, have leased the Smith packing plant in Baker to facilitate increased demands for shipments of meat.

**COMMUNITY HOUSE**—Knott, Rogers & Dunbar, 2046 N.E. Union Ave., Portland, are constructing a \$30,000 community house for the Guilds Lake defense housing project.

## UTAH

**ADMINISTRATION BUILDING**—MacIsaac & Menke and Pozzo Construction Co., 3440 East 22nd St., Los Angeles, have been awarded a negotiated contract by the U. S. District Engineer Office, Salt Lake City, for the construction of an administration building in Weber county.

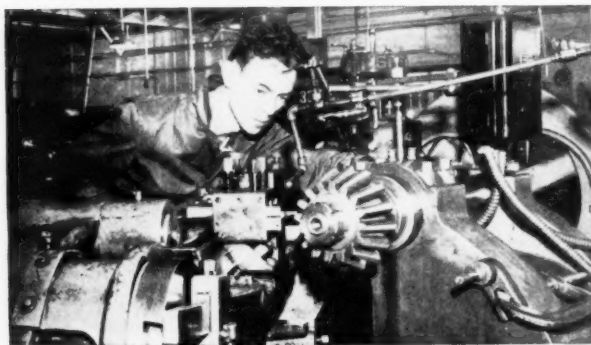
**STORAGE BUILDINGS**—Intermountain Construction Co., 325 Atlas Bldg., Salt Lake City, will construct a group of combat equipment storage buildings in Tooele county. Contract for less than \$1,000,000 by U. S. District Engineer Office, Salt Lake City.

**HEATING WAREHOUSES**—Pacific Electric & Mechanical Co., 467 O'Farrell St., San Francisco, have been awarded a negotiated contract by the U. S. District Engineer Office, Salt Lake City, for heating warehouses at an arsenal in Weber county. Cost, less than \$100,000.

**HOUSING PROJECT**—S. Patti & McDonald Construction Co., 1114 Broadway, Kansas City, Mo., will construct a housing project in Tooele county. Contract for \$659,909 awarded by Federal Public Housing Authority, Kansas City, Mo.

**ELECTRICAL SYSTEM**—Vance Electric Service, 167 Herbert Ave., Salt Lake City, will install an electrical distribution system for civilian war housing at a Quartermaster Depot in Weber county. Contract for less than \$50,000 by U. S. District Engineer Office, Salt Lake City.

**INSULATION**—Ellis W. Barker, Ness Bldg., Salt Lake City, will do an insulating job in a warehouse in Weber county. Contract for less than \$50,000 by U. S. District Engineer Office, Salt Lake City.



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MAIN OFFICE AND WORKS: BERKELEY, CALIFORNIA

**MAINTENANCE BUILDING**—P. H. Paulsen, 551½ West First South, Salt Lake City, has been awarded a negotiated contract for less than \$50,000 by the U. S. District Engineer Office, Salt Lake City, for the construction of an engineering maintenance building at an airport in Weber county.

**CIVILIAN HOUSING**—Harrison & Dorman, 13 So. and 4 West, Salt Lake City, will construct civilian housing facilities at an air base in Tooele county. Contract in excess of \$100,000 by U. S. District Engineer Office.

## WASHINGTON

**NEW FOUNDRY**—Pullman Northwest, Inc., Pullman, organized to make small parts for ships, has leased the building formerly occupied by the Langbehn Implement Co. for use as a foundry.

**CONVEYOR**—Bumstead-Wolford, 1411 Fourth Ave., Seattle, will install a pipe and ash conveyor in a steam plant at a military site in Spokane county. Contract by U. S. Army Engineers, Seattle, between \$100,000 and \$500,000.

**RECREATIONAL FACILITIES**—A. G. Homann, 112 No. Franklin, Olympia, has been awarded a negotiated contract by the U. S. Army Engineers, Seattle, for the construction of recreational facilities at a military site in Pierce county. Cost between \$100,000 and \$500,000.

**SUPPLY DEPOT**—The naval supply depot at Velox, east of Spokane, has been completed. This \$12,000,000 navy project was started last May.

**DRYDOCK**—The Everett-Pacific Co., Everett, has been awarded a \$7,005,725 contract by the Bureau of Yards and Docks, Navy Dept., for the construction of an 18,000-ton steel floating drydock and four sections of a sectional steel floating drydock.

**STEAM PLANT**—Clyde M. Ludberg, West 326 First, Spokane, will construct a steam plant building at a military site in Spokane county. Contract between \$100,000 and \$500,000 by U. S. Army Engineers, Seattle.

**STORAGE**—Hansen & Weidner, 1517 Jackson St., Spokane, will construct subsistence storage, cold storage and a warehouse at a military site in Spokane county. Contract for less than \$50,000 by U. S. Army Engineers, Seattle.



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## THE WEST ON ITS WAY

**WATCH TOWER**—Washington Lumber Co., 3447 Fourth St., Seattle, have been awarded a \$50,000 contract by the U. S. Army Engineers, Seattle, for the construction of a watch tower at a military site in Snohomish county.

**NALLEY'S TO CAN FOOD**—Nalley's, Inc., 409 Puyallup Ave., Tacoma, is converting a section of its main plant into a cannery. Its products primarily will be canned meats and vegetables. Thirty more people will be employed.

**SCHOOL**—W. G. Clark, Seattle, will build a school at Sheridan Park on the Manette Peninsula near Bremerton. Federal Works Agency awarded the contract at \$91,254.

**YARD BEING COMPLETED**—The Carl E. Edlund shipyards are being built on sites formerly occupied by the Camano Oyster Co. and the D. G. Bennie sawmill in Stanwood. Already they have been awarded a \$460,000 contract for construction of two ocean barges.

**CARGO VESSELS**—The Grays Harbor Shipbuilding Co., Aberdeen, have signed a contract to build two big non-propelled cargo vessels, 204 feet long, with 40-foot beam and 15-foot draft.

**NEW PLANT FACILITIES**—Hooker Electro-Chemical Co., Niagara Falls, N. Y., have received a \$200,000 or more contract from the Defense Plant Corp. for additional plant facilities in Washington.

**MILITARY BUILDINGS**—Hazen & Clark, 417 Welch Bldg., Spokane, \$50,000 contract by U. S. Army Engineers, Seattle, for work in Spokane county.

Hansen & Weidner, 1517 West Jackson St., Spokane, \$50,000 contract by U. S. Army Engineers, Seattle, for work in Spokane county.

Frank Lohse, Pendleton, Ore., \$25,000 contract by U. S. Army Engineers, Portland, for work in Walla Walla county.

Rainier Construction Co., American Bldg., Seattle, \$50,000 contract from U. S. Army Engineers, Seattle, for work in Kitsap county.

Chisholm & Eiford, P.O. Box 54, Bellingham, \$50,000 contract from U. S. Army Engineers, for additions to buildings in Whatcom and Skagit counties.

Gaasland Construction Co., 1161 Ellis Ave., Bellingham, \$50,000 contract from U. S. Army Engineers, Seattle, for additions to building in Snohomish county.

L. C. Havstad, Pasco, \$50,000 contract from U. S. Army Engineers, Portland, Ore., for work in Franklin county.

## WYOMING

**HOUSING PROJECT**—Mead & Mount Construction Co., 422 Denver National Bldg., Denver, have been awarded a \$642,000 contract by the Federal Public Housing Authority, Kansas City, for the construction of a 325-unit housing project in Cheyenne.

## OPPORTUNITY SECTION . . .

Priorities regulations have made it practically impossible to secure new machinery for industrial operations unless a plant is doing 100 per cent work on war projects. Even then, long delays are in prospect. The government is urging full use of existing machinery. Listed here are "machinery opportunities" immediately available here on the Pacific Coast.

### SQUIRREL CAGE MOTORS IN STOCK

75 HP 3600 RPM 440-Volt Howell Ball Bearing  
40 HP 1800 RPM 440-Volt Fairbanks Morse  
40 HP 1800 RPM 220/440-Volt Northwestern  
40 HP 900 RPM 440-Volt Type CS Westinghouse  
35 HP 1800 RPM 440-Volt Type KT Gen. Electric  
30 HP 900 RPM 220-Volt Type KT Gen. Electric  
30 HP 1200 RPM 220/440-Volt Type ST U.S.  
25 HP 900 RPM 220/440-Volt Type KT Gen. Elec.  
25 HP 1200 RPM 220/440-Volt Type KT Gen. Elec.  
25 HP 3600 RPM 220/440-Volt Type H Fair. Morse  
20 HP 900 RPM 440-Volt Type ARX A. Chalmers  
20 HP 1200 RPM 220/440-Volt Type CS West.  
15 HP 900 RPM 220/440-Volt Type CS West.  
15 HP 1800 RPM 220/440-Volt Type FR U.S.  
10 HP 1800 RPM 220/440-Volt Type FR U.S.

### SLIP RING MOTORS IN STOCK

75 HP 900 RPM 440-Volt Type HV Fair. Morse  
30 HP 900 RPM 440-Volt Type FRVI, U. S. Inter-mittent  
22 HP 1200 RPM 440-Volt Type FRVI U. S. Inter-mittent  
1½ HP 1200 RPM 220-Volt Type MT Gen. Elec.

### LITTLEJOHN-REULAND CORPORATION

Rewinding 2655 Santa Fe Avenue Repairing  
Jefferson 5255 Los Angeles, Calif. Jefferson 5255

## MACHINERY SALE MOTORS

- 1—260 H.P. Synchronous G.E. 225 RPM, 2200 volts, 210 KVA.
- 2—250 H.P. Westinghouse, Type CS, 290 RPM, 2200 volts.
- 1—200 H.P. Slip Ring G.E. 600 RPM, 440 volt motor.
- 1—200 H.P. G.E. Type I, 600 RPM, 440 volts.
- 1—200 H.P. G.E. 1800 RPM, 440 volt motor.
- 1—150 H.P. Westinghouse, Type CS, 1800 RPM, 440 volts.
- 1—100 H.P., Slip Ring, G.E., 720 RPM, 440 volts.
- 1—62½-ft. 25½-inch Double Leather Belt.
- 1—60 H.P. G.E. Type I, 1800 RPM, 440 volts.
- 1—50 H.P. Vertical Fairbanks Morse, 1200 RPM, 220 volts, solid shaft.
- 1—35 H.P. Crocker Wheeler, 1200 RPM, 220 volts.
- 1—25 H.P. G.E. Type I, 600 RPM, 220 volt motor.
- 1—10 to 30 H.P. Slip Ring, Westinghouse, Type MW, 860 RPM, 440 volts.

### GENERATORS, BLOWERS, WATER PUMPS

- 1—600 Amp, 7500 volt, Westinghouse Type F3 oil circuit breaker.
- 1—300 H.P. Triumph Water Wheel with governor, 50 ft. head.
- 1—200 KW, Westinghouse Alternating Current Generator, 900 RPM, 440 volts, 60 cycle, 3 phase.
- 1—150 H.P. Fairbanks Morse, Type B, 720 RPM, 440 volts.
- 1—150 H.P. Westinghouse Type CS, 720 RPM, 2200 volts.
- 1—No. 70 ILG Blower, 17,430 CFM, direct to 6 H.P. 340 RPM, 3 phase motor.
- 2—75 KVA Transformers, G.E. Type H, 6600 to 120/240/480 volts, 60 cycle.
- 1—50 H.P. Single Drum Mine Hoist.
- 1—45 K.W. Alternating Current Generator, U.S. Electric, 1200 RPM, 440 volts, 3 phase.

## RELIABLE ELECTRIC WORKS

1831 Q STREET

SACRAMENTO, CALIF.

## TRANSFORMERS

### Used and Rebuilt Oil-Cooled Transformers in Stock

### Single Phase, 50 or 60 Cycle 2200 to 110/220 Volts

- 3—1 K. V. A. Westinghouse
- 3—1½ K. V. A. Westinghouse
- 2—2 K. V. A. Westinghouse
- 4—3 K. V. A. Westinghouse
- 4—5 K. V. A. Westinghouse
- 3—10 K. V. A. General Electric

### Single Phase, 50 or 60 Cycle 2200 to 440/220 Volts

- 1—7½ K. V. A. Westinghouse
- 3—10 K. V. A. General Electric

### Single Phase, 50 or 60 Cycle 440 to 220/110 Volts

- 4—1½ K. V. A. Westinghouse
- 8—3 K. V. A. Westinghouse
- 12—5 K. V. A. Westinghouse
- 4—7½ K. V. A. Westinghouse
- 3—10 K. V. A. Westinghouse
- 1—37½ K. V. A. Westinghouse

## JEFFRIES TRANSFORMER CO.

Design - Build - Repair

1710 EAST 57th STREET

Los Angeles

LAfayette 0187

## WESTERN

# TRADE WINDS

NEWS ABOUT THOSE WHO DISTRIBUTE AND  
SELL INDUSTRIAL EQUIPMENT AND MATERIALS

Owens-Illinois Pacific Coast Co. held dinners in Oakland and Los Angeles recently at which 84 employees were recognized for long and faithful service. Matthew O'Connor and A. S. Riddock each received a gold pin which designated 40

years of service; James Kiminos, a 35-year emblem; Walter H. Downing, Gioacchino Calcagno and G. N. Panagiotou received 30-year emblems. Gold watches and pins symbolizing 25 years of service were awarded to 12 employees.



• Miss Frances Band of Owens Illinois Oakland corrugated department is being congratulated by H. S. Wade, R. B. Haworth, W. I. Cole and L. R. Kessler. She received watch and pin for twenty-five years of service

Joshua Hendy Iron Works, Sunnyvale, Calif., who recently purchased the Crocker-Wheeler Electric Mfg. Co., now have taken over the Pomona Pump Co. of Pomona, Calif., and its subsidiary Westco Division, located in Davenport, Iowa.

Greatly increased activity in the lines represented by Charles D. Parr has resulted in his moving to considerably enlarged quarters at 141 11th Street, San Francisco. He handles the Graco lubricating equipment manufactured by the Gray Company, Incorporated, of Minneapolis, a complete line adapted to all kinds of industries, including a mobile unit for mounting on a truck for use by contractors and others in field service.

Mr. Parr's other main line is the Hussman-Ligonier refrigeration equipment, which is being put to varied uses by the

armed forces, including units for keeping meat which are in demand for overseas operations as well as for camps and posts on the mainland. Hussman-Ligonier are also still in civilian production as far as priorities will allow. Mr. Parr also handles scales, meat choppers, and various other items.



• C. D. Parr's New Distribution Headquarters in San Francisco

Koebel Diamond Tool Co., Los Angeles, have moved to 9456 Grinnel Ave., three doors from their former plant. The new building will accommodate additional machines and a substantial increase in the working force. They manufacture a wide variety of diamond dressing, boring and precision tools for every industrial purpose.

Columbia Equipment Co., 81 S.E. Yamhill St., Portland, Ore., have added F. L. "Jerry" Jerome to their staff, to assist in the management of the company. Mr. Jerome is a former vice president of the Aurora-Western Road Machinery Co., of Aurora, Ill.

Harvill Corporation, of Los Angeles, have appointed Arthur A. Turton to the position of chief engineer. He had been consulting engineer for the past year. He has been associated with Boeing, Curtiss-Wright, North American and other aircraft companies.

Fir-Tex of Northern California are moving to new offices in the Insurance Center Building, 206 Sansome St., San Francisco. Their old address was 123 Kansas St. They manufacture insulation products.

Dulien Steel Products, Inc., 414 First Ave., South, Seattle, Washington, are the new exclusive sales agency for the Kerlow Steel Flooring Co. of Jersey City, N. J., in the Mountain States territory.

Winslow Engineering Co. now are located at 4069-73 Hollis St., in Oakland, Calif.

A. P. Robinson Co. now are doing business in their new location, 3410 Woodland Park Ave., Seattle, Wash. They handle tile, marble, terrazzo, granite and other building specialties.

**Correction:** The Irving Subway Grating Co. have opened a plant in Oakland instead of San Francisco, as published in the December issue of Western Industry.



# YOURS FOR THE ASKING

1188

• **"Phosphoric Acid"**—A New Reagent for Use with Hot Process Water Softeners" is the title of a reprinted article. Paper describes in simple language the use of phosphoric acid as the reagent in single or two-stage water softeners which take the place of mono-sodium, di-sodium, and tri-sodium phosphate, resulting in better control of the alkalinity at a much lower cost of reagents. Comparison of chemical costs are given as well as data showing the effectiveness of this treatment in typical installation. *Cochrane Corp., Seventeenth and Allegheny, Philadelphia, Penn.*

1189

• **Sanitary Pumps**—Four-page bulletin No. 115 illustrates, describes and gives applications of sanitary pumps. Graph shows the comparison between the capacity of this pump and conventional type rotary pumps, pointing out there is practically no loss of volume due to internal wear. A specification table is included. *Blackmer Pump Co., Grand Rapids, Mich.*

1190

• **Milling Machine**—A six-page leaflet tells how this machine meets the problems facing plants today. The machine combines both a horizontal and vertical spindle capable of any angle. Each spindle is driven by its own powerful motor and they can be used separately or together. A description of accessories available are included, too. *Aircraft Machinery Corp., Burbank, Calif.*

1191

• **Proportioning Burner**—A 16-page catalog giving complete information on this burner, which is an instrument for precision control of temperature and atmosphere in all heating applications. Included are diagrams for automatic control hook-ups, and several pages of installation pictures. *Hauck Manufacturing Co., 124 Tenth St., Brooklyn, N. Y.*

1192

• **Fluorescent Lighting**—Eight-page folder illustrated in color with photographs, drawings and diagrams. Booklet explains the important place that cold cathode fluorescent illumination is taking in war plants throughout the country, and covers the new fluorescent development in non-technical terms. Also there is a section especially planned for the engineer. *National Transformer Corp., 224 Twenty-first Ave., Paterson, N. J.*

1193

• **Instruments**—Three bulletins, one describing SR-4 strain gage, and two describing recording and indicating instruments for use with the gages, have been made available. The bulletin on the SR-4 strain gage describes an entirely new and revolutionary method for determining stresses in structures and machines, gives detailed

descriptions of the three standard gages, their application in measuring and recording dynamic and semi-dynamic strains and instructions for installing the gages on structures to be analyzed. The other two bulletins are detailed descriptions of the two instruments and installation operating information. *The Baldwin Locomotive Works, Baldwin Southwark Div., Philadelphia, Penn.*

1194

• **Center Scope**—A 16-page, two-color booklet describing methods of optical locating and centering with this instrument. Lists case histories and pictures applications. Describes in detail the story of optics and how optics are used by the center scope. Explains operation, pointing out how accuracy is obtained. *Center Scope Instrument Co., Los Angeles, Calif.*

**You owe it to yourself to keep posted—only the efficient business survives under the strain and pressure of the war effort. Literature listed in these columns may be just the answer to your need for greater production, substitute materials or knowledge of how to care for your equipment. Just drop a note to Western Industry, 503 Market St., San Francisco, and copies will be forwarded to you. If you do not use business letterheads, please name your company affiliation.**

1195

• **Adhesives**—Vegimal is the trade name for a series of vegetable base adhesives designed for a diversified range of applications in all industries. It is a viscous, light tan colored liquid, made by conversion of domestic starches with plasticizing chemicals added to produce various drying or setting speeds. Can be applied by machine or brush application. Folder suggests uses and lists specific applications. *Paisley Products, Inc., 1770 Canalport Ave., Chicago, Ill.*

1196

• **Tap Catalog**—A 134-page catalog, loose-leaf bound, giving specifications, prices, and other data on a line of standard and special taps, thread milling cutters and other forms of threading tools and gages. Contains reference tables of daily use to the shop man and production engineer. *Detroit Tap & Tool Co., 8432 Butler St., Detroit, Mich.*

1197

• **Graphite Lubrication**—A handbook guide to increased war production for plant engineers. Contents include: What Colloidal Graphite Does; An Indexed Guide to Better Lubrication; Standard Cogroph Concentrates; Prices of Standard Cogroph Products. *Nassau Laboratories, Hackensack, N. J.*

1198

• **Electrical Connector**—A condensed catalog supplement covering the most popular types of electrical connectors. Deals briefly with the two leading types used in aircraft applications and details more complete information on connectors for radio microphones, sound equipment, power heavy-duty control circuits, public address systems and geophysical research; electronic low-level circuits and small power applications. Illustrated. *Cannon Electric Development Co., 3209 Humboldt St., Los Angeles, Calif.*

1199

• **Shipment Protection**—A 12-page house organ reveals how many types of war and civilian products are protected in transit for safe arrival at far destinations. Part of the shipments mentioned are life rafts, paper, metal parts, planes, food products, tractors, machine guns and orange juice. *Acme Steel Co., 432 Bryant St., San Francisco, Calif.*

1200

• **SCV Pump**—A pump for clear liquid service. Catalog D2-1042 points out the desirable features of this pump, showing its advantages over conventional double suction pumps. Points out that it is no trouble for the maintenance man. General construction is shown, and dimensions and specifications are included. *Economy Pumps, Inc., Hamilton, Ohio.*

1201

• **Aircraft Tools**—A catalog of cupforged, comparimeter inspected, microglass polished precision aircraft tools. Illustrates and describes tools, giving application, special features, construction and materials and sizes. Indexed and spiral-bound. *Aero Tool Co., 231 West Olive St., Burbank, Calif.*

1202

• **Watchman**—A modernized manual of rules, regulations and instructive information to guide watchmen, guards and supervising personnel on plant protection for national defense. Thirty-page booklet tells the type of man to hire, his training and necessary equipment. *Detex Neuman Watchlock System, 420 Market St., San Francisco, Calif.*

1203

• **Lighting**—Products included in booklet, serial 2130, are the types which will find most frequent use in industrial plants producing war goods. Particular emphasis is placed on "Fluralex," a non-metallic reflector unit and the silver mirrored glass reflector units for high bay installation which conserve critical materials. Data also are included on fluorescent industrial lighting units. *Curtis Lighting, Inc., 6135 West 65th St., Chicago, Ill.*

*A Finish for Every Industrial Need*

**PACIFIC PAINT & VARNISH CO.**

544 MARKET STREET

SAN FRANCISCO

EXbrook 3038

# THE SHOWCASE

• **Rubber Lung** — Supplements and increases the effectiveness of the Schaefer prone pressure treatment to restore breathing suspended through shock, drowning, fumes and gases. Device is strapped to the



back or stomach of the victim, adhering to the body through suction. Raising and lowering the lung handle at normal breathing rate activates muscles of victim, causing them to inhale and exhale air. *E. D. Bullard Co., 275 Eighth St., San Francisco, Calif.*

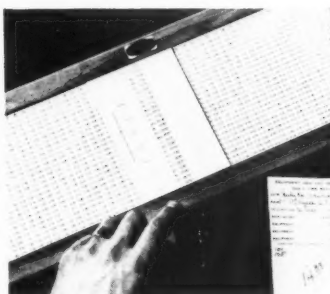
• **Drum-Loading Truck** — The Upsy truck, handling up to a thousand pounds, makes barrel or drum moving a one-man job. A sliding hook on the truck's center rail catches the top bead or chime of drum or barrel. Trucker pulls down on handles, tilting drum toward him, allowing nose



prongs to slide under bottom bead of drum or barrel. As truck handles are lowered to trucking position, the nose prong lifts the drum or barrel off the floor and trucker is ready to "roll." Literature available from *American Pulley Co., 4200 Wissabickon Ave., Philadelphia, Penn.*

• **Invisible Gloves** — A creme for the protection of the skin. Prevents pores from becoming clogged with substances hard to remove. Applied before work, film formed is a positive barrier against skin absorption of most types of non-water carrying materials and irritants. To remove, enough water to moisten hands is used, rubbing till lather forms, and rinsing. *Cadet Creme Co., 151 Farrar Ave., Worcester, Mass.*

• **Pay Roll Calculator** — Pay rolls and job costs can be figured in a fraction of the usual time through the use of this new cal-



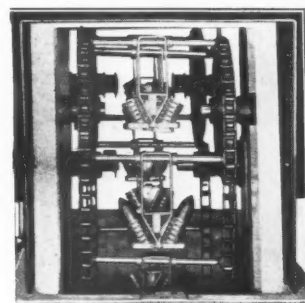
culator. Operating on a simple new principle, this device includes all hourly rates of pay from 50c to \$1.75 with a half-cent spread between rates. It covers all time periods up to 104 hours with divisions of one-tenth of an hour. Made of lacquered wood and will fit into a desk drawer. *Berger-Bricker Co., 433 So. Spring St., Los Angeles, Calif.*

• **Flud-Lite Magnifiers** — Inspection tools which combine magnification and shadow-free fluorescent lighting. Useful for small parts, assembly, and finding cracks and



scratches. Also for use in map making and reading, small instrument manufacture, engraving and counterfeit detection. Magnifier has a fluorescent daylight lamp, high-quality lens, five inches in diameter with focal length of 13 inches. Frame and arms are of die castings, ribbed for strength and rigidity. Swivel joints and friction arm joints permit movement of lens to any desired position without moving base. *Stanley Electric Tool Div., The Stanley Works, New Britain, Conn.*

• **Shell Degreaser** — Designed to efficiently degrease the interior of shell casings as well as exteriors. Utilizes a conveyor belt equipped with swiveled carrier basket-



pockets, to automatically and continuously place the shells in position for facing Phill-

(Continued on next page)

## Yessir!

WESTERN INDUSTRY  
503 Market Street  
San Francisco

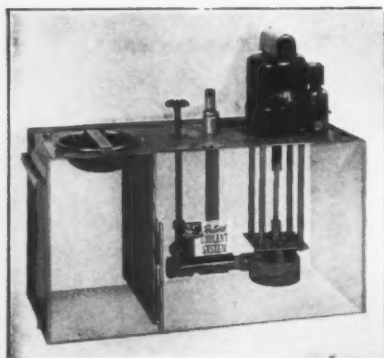
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Company.....  
Address.....

I'm Interested in Anything New That Will Help Me Do a BETTER JOB

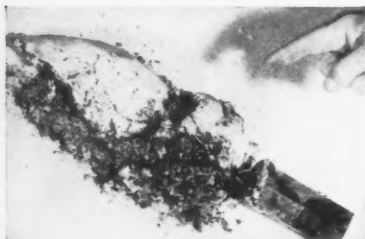
**SHOWCASE** (Cont'd from preceding page)  
solv in the shell interior under pressure. Illustrated unit is fitted to degrease 37-mm pieces at the rate of 1,500 per hour according to *Phillips Manufacturing Co., 3475 West Touhy Ave., Northtown Sta., Chicago, Ill.*

• **Coolant System** — Uses a centrifugal pump designed to deliver controlled coolant flow from 10 to 1,000 gallons per hour. The unit provides large coolant volume



and high flushing capacity, making it particularly applicable for multiple spindle and deep drilling work, drill press installations, large cut-off machines, turret lathes, and as a stand-by unit for central systems. *Gray-Mills Co., 213 W. Ontario St., Chicago, Ill.*

• **Bomb Extinguisher** — Originally designed to extinguish incendiary bombs which are made of magnesium and ther-

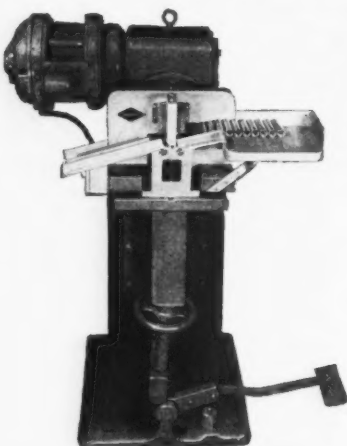


mite, but also will put out fires which occur in industrial plants producing war mate-

rials of magnesium, thermite, aluminum, and similar metals. It is a compound of harmless, non-poisonous powder, composed entirely of refractory materials. Packed in bags which are dropped over the fire. Paper burns, freeing the powder to spread over burning object. *United Laboratories, Inc., 16901 Euclid Ave., Cleveland, Ohio.*

• **Tilt Trap** — A three-valve tilt trap for variable pressures on lifting service. Sturdy construction of female trunnion supported on center bearings, and male steam and water ends which are relieved of any weight carried on the packing, is the same as that used on the basic Acker return and non-return tilt traps. *W. M. Acker Organization, Inc., Cleveland, Ohio.*

• **Knurling Machine** — Semi-automatic, with a production rate of 1,000 pieces, or more, per hour. According to manufacturer, the machine substantially increases the output of knurled shells by replacing lathe



knurling and taking pressure off the production line. Work pieces are fed by hand. Action of the foot treadle brings the work to the knurling roll and then ejects upon retraction. *Wm. A. Force & Co., Inc., 216 Nichols Ave., Brooklyn, N.Y.*

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• **Porcelain Renew** — "Jo-Lar" conceals the chips, cracks or scratches made in plastic, porcelain, enamel, glass or other vitreous ware. Will not crack, check or shrink, and is waterproof, alcohol, gasoline and acid proof. *Johnson Products Co., 507 Fifth Ave., New York, N. Y.*

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Fiege Electroline Wire Rope Fittings  
Safe-Line Clamps—Safety Clips  
Genuine Crosby Wire Rope Clips

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# *Durability* IN GLASS . . . THEN AND NOW

Durability in glass containers was emphasized by early glass makers over 5000 years ago. Because of this durability, glass containers dating back to 3500 B. C. are still in existence. And through the ages, glass manufacturers have constantly improved the factor of

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**GLASS COMPANY**

7507 So. Roseberry Ave., Los Angeles, California  
in San Francisco: Northern Glass Co., 118 Sacramento St.

Market Street  
San Francisco, Calif.

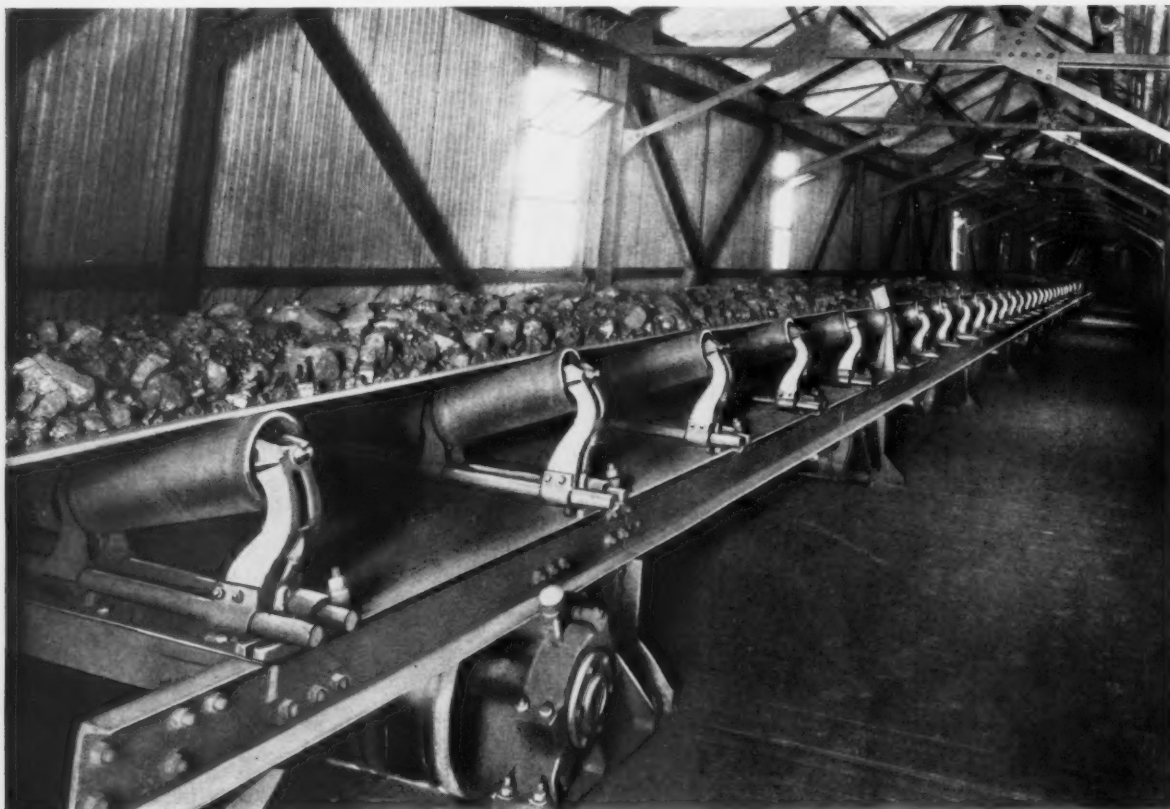
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# STEPHENS-ADAMSON CONVEYORS

